Ghost Writer 128

word processor and spelling-checker

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This manual has been carefully tested and to the best of our knowledge the text is free of typographical and technical errors. If you should catch any errors, or have any thoughts on how to better this manual we would appreciate hearing about them.

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I. INTRODUCTION

1.1 HOW TO USE THIS MANUAL

Welcome to GhostWriter 128^{tm}, a word processing program designed for the Commodore 128 computer. GhostWriter 128 delivers many features of more expensive word processors at a reasonable cost.

Although not everybody will use all the features in this simple to use, yet powerful word processor, this manual will illustrate each feature in a number of sections.

- The Control List will detail all screen and printer related symbols which can alter a documents appearance.
- The Command List will give a brief description of all the commands with reference to defaults, legal range numbers, and any options that may be available.
- The Spell Checker section will describe all activities that can be performed regarding Spell Checking, and necessary Dictionary Functions.
- The "How To" Section will show a concise Step by Step method to performing a specific task. "See also" References will be made where applicable. Use the Main Index to look up "How To" entries quickly.

In addition to the above mentioned sections, there will be other sections to help you make the most of your new word processor...

- How to Get Started, and what equipment will be needed.
- Important Key List, showing all keys which have special purpose.
- Document Paging will describe the different types of pages in Ghostwriter while illustrating how to move about those pages.
- Document Printing, showing all the options involved in printing a document, including any defaults, legal ranges, or conditions available.
- Mail Merge/Document Filling describes all aspects in putting together a document with variable information.
- Spell Checker/Dictionary Functions details how to correct a document for typographical or spelling errors. The utility program will allow you to add words to the dictionary and maintain it.
- Appendices, with sections on System Prompts, System Messages, Sample Documents, Program Utilities, and Dictionary Files supplied on the diskette, Data File Format, ASCII to CHR$ Conversion Chart, ASCII equivalents for Format Symbols, and how to drive Centronics Parallel or CBM IEEE type printers.

I. INTRODUCTION

1.2 GETTING STARTED

This section describes and discusses the system requirements for using GhostWriter, how to load the program, and gives a quick overview of what can be done using GhostWriter.

1.2.1 System Configuration

The GhostWriter word processor is designed to work on a Commodore 128 in either a 40 or an 80 column format. The format used will be based on the hardware configuration of your system.

System Requirements:

Equipment List	40 Column Set-Up	80 Column Set-Up
Computer:	• Commodore 128	• Commodore 128
40/80 Key position:	• Up	• Down
Color/HIRES Monitor:*	• 1701, or 1702	• 1902 RGBI
Disk Drive:	• 1541, or 1571	• 1541, or 1571
Dot Matrix or** Letter Quality	• Compatible Printer** with necessary printer interface	• Compatible Printer** with necessary printer interface

Note* Either a 40 or 80 column Monochrome Monitor can be substituted for the above mentioned monitors.

Note** GhostWriter will not work with RS232-C type serial printers. Printer interfaces that will work include Centronics Parallel and CBM IEEE-488.

1.2.2 Loading the Program

- Turn on the power to the disk drive.
- For 80 Column: Lock the 40/80 display switch in the down position.
  or
- For 40 Column: Lock the 40/80 display switch in the up position.
- Turn on the power to the computer.

The program will auto-boot, and finish loading in either 50 seconds, or 3 minutes depending on the use of a 1571, or 1541 respectively.

1.2.3 A Quick Overview

The Document Editor
Once the program is finished loading, the document editor will be displayed. This is where the actual "word processing" takes place.

The Formatted Approach
GhostWriter 128 is a "see it as it is" type of word processor. This simply means that as you type your text into the screen, it is formatted. Automatically.

The Format Line
The first line of any document is the format line. The format line defines a number of document parameters including left and right margins, and any tabs that may be necessary.

Special Display Characters
GhostWriter 128 has fifteen display characters (symbols) that represent either a function or a character. You will notice that a SPACE character is represented by a small faint dot, and that the format line begins with a square of four lines. Carriage return is symbolized by a triangle pointing left.

Entering Text
To enter text, simply type. Anything typed into the word processor can be edited, and re-edited, or can be manipulated through a number of word processing commands that are available. The word processor can hold approximately 63,000 characters, or 999 pages... whichever comes first.

Spellchecking a Document
Prior to printing you can use the built in 30,000 word dictionary to spell check the document for spelling or typographical errors. Then you can easily edit and correct the document for a finished professional look.

Printing a Document
When it is time to print the document, a special print option screen will display all the available options. These options can be altered depending on the type of printer or interface being used, or to use a certain feature of the program.

Ending the Session
After creating a document, and printing it, you may want to save it for future use, or just to keep a record of it. Save the document, and Exit the program through the Quit feature.

1.2.4 A Brief Tutorial

The first screen that appears is the screen editor. This is the normal word processing state. You should see the screen heading (at the top) and a format line below that. Format lines are distinguishable by the format symbol (4 small horizontal lines) which preceed the format line. Just below the format line, in the first column of the left margin, the cursor (the flashing square) is positioned over what appears to be a faint dot.

The faint dot is used to represent a typed space. Press the space bar a few times and more dots will appear. Press the RETURN key. Now type the following line:

Once upon a time in a place not to

Continue by typing an additional "o" immediately after the "to". If working with a 40 column system, you will notice that the line jumped partially off the screen to the left. Don't be alarmed - This is known as side-scrolling. Press the space bar for one space and continue to finish the sentence by typing:

far away there lived a large

Type a space after the word "large" and take a look at the column number in the heading. It reads 70. The right margin is initially set to 74. (Note the RETURN symbol (triangle pointing left) is in the 75th column.) Now type the word "dragon" but do not type the letter "n" just yet. Position your finger over the "n" key and watch the screen as you press it.

Notice that because the entire word "dragon" would not fit on the last line it was automatically moved down to the next line. This is known as "word-wrapping". For 40 column displays, this is accomplished by shifting the entire screen back (side-scrolling) to the start of the next line.

This side-scrolling effect can be turned on or off by pressing and releasing the CBM key (Commodore logo, lower left on the keyboard), followed by pressing the "w" key. When on, the "W" in GhostWriter will be highlighted and the screen width will default to 38 columns for those using 40 column displays. 80 column displays default to 75 columns. (Which is actually one more than the default right margin setting that all documents initially start at.)

Continue to type in text, (any text, such as portions of this tutorial), until the screen is nearly filled. Text will not side-scroll on 40 column displays while in the width mode.

Keep typing and watch how the text scrolls up off the screen. This is similiar to side-scrolling only it is called page-scrolling.

Now, re-issue the WIDTH command (CBM w) to reset the right margin setting back to column 74. The "W" in GhostWriter in the heading will be turned off. If the "W" is still on, re-issue the command to properly toggle WIDTH command off.

1.2.4 A Brief Tutorial (Cont)

Now it is time to print out the text you have in memory. Press and release the CBM key followed by "p". You will see the Print Option screen. The only option that may need to be changed is the "Printer Type:" option.

If you are using a VIC or CBM printer, then you don't need to change anything. However, if you are using a NON-CBM printer, you should enter the first letter of your printer into the "Printer Type:" option. (Please see section 2.5.2 on page 31 for the correct setting of printers.)

To change any print options just move the cursor using the CRSR keys or keep pressing RETURN to move from one option to the next.

Make sure your printer is on and loaded with paper. Press F1 to start printing. If nothing happens, double-check:

1) all connections to and from the printer, computer, interface, and power,
2) "Printer Type:" setting,
3) printer head is fully reset (for VIC printers), and
4) on-line switches (for other printers with those switches)

For printer heads that are not reset, turn the printer off and back on. Then hold the STOP key and re-issue the print command once again.

Assuming that you have gotten thus far, your page of text should be printing. Although the context isn't useful, you should now have the confidence to go through the remainder of the manual and learn more about capabilities of GhostWriter.

The manual is in a reference orientated format. If you should ever have a problem using a certain command or function, please consult the MAIN INDEX on page 73.

Experiment! The best overall way to learn anything is to experiment, and even the least sucessful experiments can provide useful insight.

Note: Before attempting to STORE (save) documents to disk, it is suggested that you format a few blank data disks. This can be done from within GhostWriter. (See section 2.3.4 Disk Commands on page 16 for more on FORMAT.)

II. INSIDE GHOSTWRITER

2.1 IMPORTANT KEY LIST

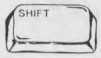
This section goes over the different special keys that have specific functions while using GhostWriter.

2.1.1 Special Keys

There are a number of special keys on the Commodore 128 marked with abbreviations such as CLR or INST. Some of these keys are actually two keys in one (The key itself, and the key itself used in conjunction with the SHIFT).

Here is a list of what each key will do:

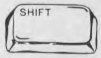
&



HOME (Press the CLR/HOME Key)
Pressed once, this key brings the cursor to the top left corner of the screen. Pressed twice, and the cursor moves to the first word at the top of the page.

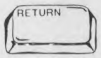
CLR (Press SHIFT and the CLR/HOME Key)
Moves the cursor to the end of the last word on the current page.

&

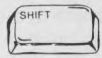


DEL (Press the INST/DEL Key)
Deletes the character under the cursor. If at the end of the document, it backspaces and deletes the character. (Can NOT be used to delete End Of Page symbols; See: Joining Two Pages Together on page 11)

INST (Press SHIFT and the INST/DEL Key)
Inserts a space before a character under the cursor. The pushed line is automatically formatted.

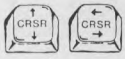


&

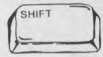


RETURN
A RETURN is actually a format symbol. It indicates the end of a line, as in a Carriage Return. A RETURN can be inserted in between text; any words following would be brought down to the next line. Using RETURNS on lines by themselves will create a line-spacing between text.

SHIFT RETURN
Moves the cursor down to the next line without adding a Carriage Return.



&

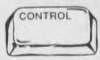


CRSR Keys
Both sets of Cursor Keys can be used to move the cursor around. The top set are used singularly, while the bottom right set have to be shifted to get opposite directions. Cursor keys will follow the outline of a documents body, and will scroll, or wrap around the outer edges as the cursor is moved.

or

2.1.1 Special Keys (Cont)

TAB
This key is positioned in the upper left row of the keyboard and can be pressed to do one of two things. In the format line, pressing this key will set a tab. In the body of the text, pressing this key will perform a tab based on tab settings in the format line.



CONTROL
This key is pressed and released before entering a format control symbol. A "C" is always visible in the lowerleft corner of the screen while in Control Mode. This key can be used during the entry of a FIND or REPLACE sequence to search for embedded format symbols. If the CONTROL key is pressed in error, press the STOP key.

CBM Key (The Commodore Key)
This key is positioned in the lower left corner of the keyboard and has the Commodore logo on it. This key is pressed and released before issuing a word processor command. If pressed in error, press the CBM key again, or press the STOP key.

STOP
This key is generally used to cancel or abort a command. The STOP key is ignored if pressed while typing.

2.2.1 Function Keys

The separate row of four function keys on the upper right portion of the keyboard, (above the numeric keypad), become eight function keys when used with the shift. The unshifted keys, F1, F3, F5, and F7 can be used directly, while the shifted keys, F2, F4, F6, and F8 require a shift. While typing text, the function keys have the following purposes:

F1 - Page Forward
F2 - Page Backward

F3 - Next Screen of Text
F4 - Previous Screen of Text

F5* - Move Cursor to Next Tab Stop or End of the Line
F6 - Move Cursor to Opposite End of Line

F7 - To Type an Insert, Press it Again to End the Insert
F8 - Highlight text and press RETURN to delete or STOP to cancel

*Note: Pressing F5 is **not** intended to be used as tab maker. (You must press the TAB key to produce a tab.) F5 is for viewing or editing of text/data on the screen by side-scrolling the cursor across the width of the document from tab stop to tab stop.

2.2 FORMATTING TEXT & OTHER CONTROL CODES

GhostWriter formats your text as it is typed in. A number of graphic symbols are used to indicate specific types of formatting. Format symbols are typed by first pressing and releasing the CONTROL key, and then by pressing the associated letter key. When the CONTROL key is pressed and released a "C" will appear in the lower left corner of the screen denoting that the next key pressed will be a control code or a format symbol.

2.2.1 Alphabetical Chart of CONTROL Codes & Format Symbols

These keys/codes are used by first pressing and releasing the CONTROL key.

Graphic Symbol	Letter Code	Description	Page/Section Number	
(◆)	c	Centering a Line	11	2.2.6
(⚡)	d	Don't Merge (Mail Merge)	14	2.2.12
(●)	e	Embolden (Printer Related)	12	2.2.10
(≡)	f	Format Line (Copy last line used)	9	2.2.2
	h	Hide Graphic Symbols (Toggle: On/Off)	12	2.2.9
(➡)	i	Indent a Paragraph (Based on TABS)	10	2.2.4
(↕)	m	Merge (Mail Blanks, and Mail Data)	14	2.2.12
(⧗)	p	Page Break	11	2.2.7
(↓)	s	Subscript (Printer Related)	12	2.2.10
(▶)	t	Tab (Setting, Tabbing)	10,11	2.2.3,5
(_)	u	Underline (Printer Related)	12	2.2.10
(▲)	.	Numerical Tabbing	11	2.2.5
(#)	#	Page Number Identifier	12	2.2.8
(↑)	UpArrow	Superscript (Printer Related)	12	2.2.10

The following are also graphic symbols but are not used with the CONTROL key.

(·)	SPACE	Indicates Intentional Spaced Character	12	2.2.9
(◀)	RETURN	Indicates a Carriage Return	12	2.2.9

2.2.2 The Format Line

When starting a new document, a format line is present. A format line is like a normal line of text except that it begins with a format symbol ≡ . The remainder of the line consists of SPACEs and ends with a RETURN. The format line contains the markings for the left margin, right margin, and any tabs which may be required for a document. The format line can also contain information on line spacing, options pertaining to pagination, and ASCII control code assignment.

Format symbols are created by pressing and releasing the CONTROL key and then typing the letter "f". The last format line used will be copied. Format lines can appear anywhere in the document so that TAB Stops, and margins can be altered in different sections of the document.

2.2.3 Setting Margins and Tabs

Margin and tab settings are contained within the format line. The standard format line that is placed at the beginning of all new documents has a left margin setting of 5, and a right margin setting of 74. The first TAB symbol ▶ of any format line represents the left margin. The end of the format line represents the right margin.

Left Margin To alter the left margin, move the cursor to the column in the format line where the margin should begin and create a TAB. (Pressing the TAB key, or pressing and releasing the CONTROL key followed by "t" will create a tab.) Now delete any TABs that exist before the newly set margin setting.

Right Margin To increase the right margin, insert spaces using the SHIFT and INST/DEL key until the end of the format line reaches the required column. To decrease the right margin, hold the delete key (INST/DEL) until the right margin reaches the desired column. (Maximum setting is 240.)

Set Tab To set a tab, move the cursor to the column in the format line (or create a new format line) where the TAB should be placed and press and release the CONTROL key. Now press the letter "t" and a TAB symbol will appear. TAB settings control paragraph indentation, numerical tabbings, and regular column tabbing.

Note: The TAB key in the upper left row of the keyboard can be used to produce a tab setting while the cursor is in the format line.

Clear Tab To clear a tab, simply move the cursor onto the TAB symbol in the format line and press the SPACE BAR to delete it.

2.2.4 Indentation

While typing in text, it is possible to indent an entire paragraph by preceeding the paragraph with an indent symbol ➡. Indents are based on the TABs set in the format line. To indent a paragraph press and release the CONTROL key, and type the letter "i". Indentation ends when a RETURN is typed. More than one indent symbol can be used if required. This option is similar to temporarily altering the left margin.

For Example: ≡▶..▶..▶.....◀

➡ This paragraph has been indented using one indent symbol. It will remain in effect until a RETURN symbol is typed.◀

◀

➡ ➡ This paragraph has been indented after using two indent symbols. It will remain in effect until a RETURN symbol is typed.◀

2.2.5 Tab Stops & Numerical Tab Stops

Normal Tabs While typing in text a TAB symbol ▶ (CONTROL t) can be keyed in to align text in a specified format according to any tabs that were previously set in the format line.

Note: The TAB key in the upper left row of the keyboard can be used to move to a specific tab stop.

For Example: ≡▶..▶.....▶.....▶.....◀

▶June	▶5th	▶1975
▶July	▶4th	▶1976

Numeric Tabs A numerical TAB ▲ (CONTROL .) is similar to a regular TAB, however it causes the following number to line up according to its decimal point.

For Example: ≡▶...▶.....▶.....▶.....◀

▲$19.95	▲.23	▲3.14957
▲$1.70	▲65.001	▲1.527e-4

2.2.6 Centering Text

Individual lines of text can be automatically centered between the left and right margins by typing a CENTER symbol ◆ (CONTROL c) before the text. Centered lines should be terminated by typing a RETURN.

2.2.7 Starting a New Page / Joining Pages Together

New Page While typing you may need to start a new page. Start a new page by typing in a Page End symbol ⧗ (CONTROL p). The cursor will automatically be at the top of the next page.

Join Pages At the end of each page is an End of Page symbol. To join two pages together as one, delete the page ending symbol in between the two pages by using the DELETE command, F8 key (SHIFT F7). The DEL (delete) key can not be used to delete a page ending symbol.

Note: The last End of Page symbol cannot be deleted.

2.2.8 Assigning the Page Number

When the Page Number symbol # is typed into a document, it will represent the actual page number during a print out. To type a Page Number symbol, press and release the CONTROL key, and type a "#" (SHIFT 3). The Page Number symbol may be placed anywhere in the document, it may even have characters placed around it.

For Example: #, or Page #, or Page (#)
Where # is the equivalent of CONTROL # (Shift 3).

Note: The Page Number symbol substitutes an actual number during the printing of the document for every page the symbol is assigned to. The page number is increased by one at the start of every new page. The initial page number can be altered under the Print Label # option under the Print Options menu.

2.2.9 Other Graphic Symbols & Control Codes

There are a couple of graphic symbols that are not used with the CONTROL key. When the space bar is typed, a faint SPACE symbol · is displayed. The RETURN symbol ◀ is the equivalent of a Carriage Return, and is usually used to terminate a number of CONTROL codes.

There is one CONTROL code that does not have a graphic symbol. The Hide Symbol Command (CONTROL h) can be used to hide the graphic symbols from the screen display. The graphic symbols can be restored by issuing the command again. It is possible to enter text in both modes. Use the mode which you feel more comfortable with.

2.2.10 Printer Related Format Symbols

There are other format symbols that are used to control just the printed format of the document. These symbols are keyed in the same way by pressing and releasing the CONTROL key, and then by pressing the following keys:

e	Emboldening ON/OFF*	(●)
u	Underlining ON/OFF*	(═)
s	Subscript*	(↓)
I	Superscript*	(↑)
#	Inserts Printed Page Number	(#)
0-9	Send Assigned ASCII Code	(1)(2)(3)(4)(5)
		(6)(7)(8)(9)(0)

* NOTE:
Not all printers can take advantage of these printer related features. Also, the printer type selected during a printout can have an effect on these formats.

See the sections 2.5.2 Printer Type and 2.5.19 Printer/Interface Configurations on pages 31 and 36.

2.2.11 Assigning ASCII Printer Codes

Many printers have special features that can be selected by sending two or more ASCII codes. The ability to use assigned printer codes in GhostWriter is a two-step process.

STEP 1) Assign the ASCII equivalent code to a number in the format line.
STEP 2) Use the newly assigned number in the body of the text to send the desired ASCII code to the printer during a print out.

For Example: The EPSON FX-80 printer can print in italics if the computer can send an ESC "4" sequence. An ESC "5" will return the printer back to standard characters.

Character Code (CHR$)	Decimal Equivalent (ASCII)
ESC	27
"4"	52
"5"	53

(See Appendix F on page 71 for an ASCII to CHR$ chart)

Step 1: While in the format line, press and release the CONTROL key. Now type one of the format numbers (0 thru 9 are legal). In this case type a zero, ("0") followed by an equal sign ("="). Immediately after the equal sign, type the number of the specified character. Leave a SPACE after the number, and continue on with assigning the remaining codes. (Assign each code to a different number.)

Example: CTRL Key 0 = 27 CTRL Key 1 = 52 CTRL Key 2 = 53
(.....typed on a format line.....)

Step 2: Now after the assigning of the codes, any occurrence of a CONTROL 0 in the document will issue an ESC code (27) to the printer. A CONTROL 1 will issue a (52), and a CONTROL 2 will send a (53). So to print out a phrase in italics, and return to normal, you would type in a CONTROL 0 followed by CONTROL 1, and then type the text, followed by a CONTROL 0 and a CONTROL 2. Although the screen display will not indicate italics, the text between the codes should be in italics after a print out.

Example: CTRL Key 0 CTRL Key 1 This is Italic. CTRL Key 0 CTRL Key 2
(typed within the document)

*NOTE:
For those codes that require an ESC followed by a letter, there is an optional way to assign these codes. For example, to select double strike on an EPSON printer, an ESC "G" sequence is required. This is the same as sending a 27 followed by a 71.

By assigning CONTROL 0 = g in the format line, an ESC code (27) will automatically be sent with the value for the "g" (71) during a print out, whenever the CONTROL 0 is issued in the document.

2.2.12 Document Merge Format Symbols

There are two merge format symbols that can be used to prepare names, addresses, or any other type of document printing that may require "variable entries". These symbols are keyed in by first pressing and releasing the CONTROL key and then by pressing the following letter...

m	-	Merge Point	(↕)
d	-	Don't Merge	(⚡)

The MERGE symbol is typed into the main document wherever variable information from the Work Page is to be inserted during a print out. A MERGE symbol is also typed out before each piece of information in the Work Page.

A DON'T MERGE symbol is typed in the Work Page between "sets" of information such as one set of a name and address. A DON'T MERGE symbol can also be used to indicate what information should not be merged into the document.

(Mail Merging is fully explained in section 2.6 on page 37)

2.2.13 Line Spacing

Whole line spacing can be changed at any time within a document. By entering a single digit number in the second column of a format line (immediately after the format symbol (≡)), subsequent lines will be spaced by that many lines. Although the screen display will not space the lines, the line counter will show the correct line position of the text while moving the cursor up or down.

For Example: ≡ 2 ... ▶ ..... ◀

Entering a 2 in the second column will produce double line spacing.

Legal entries are 1 thru 9. Single spacing is the default.

2.2.14 Pagination Options

Much like line spacing, a few pagination letter options can be placed in the second column of a format line to produce a different effect while using the auto paginate command. If the second column of a format line is being filled with a line spacing number, simply create another format line (CONTROL f) and place the pagination option in that format line. Pagination options are:

p	-	paragraphs stay intact
s	-	split paragraphs
t	-	top of page

The first two options (p, s) deal with paragraph splitting, while the third option (t) can be used through-out the document to indicate where a "forced" page break should be indicated. Any text following a format line with the "t" option will start at the next page upon issuing the pagination command.

(Auto Pagination is described in section 2.3.2 on page 15)

2.3 COMMAND LIST

All commands are initiated by pressing and releasing the CBM key. The prompt "Which Command?" will be displayed in the screen heading. At this point, type in the letter key for the desired command. If the command has any further menus to display, they will appear in the screen heading.

2.3.1 Alphabetical Chart of System Commands

These key/commands are used by pressing an releasing the CBM key.

Letter	Description	Page/Section
a	Auto Pagination	15 2.3.2
c	Copy Text from One Part of a Document to Another	16 2.3.3
d	Disk Commands	16 2.3.4
f	Find an Exact Phrase in the Document	17 2.3.5
F	Find a Phrase in Any Letter Case	17 2.3.5
g	Go to a Page	17 2.3.6
m	Move Text from One Part of a Document to Another	18 2.3.7
M	Merge a Document from Other Word Processor Files	18 2.3.8
n	New Document (Start a New Document)	19 2.3.9
o	Open an Existing Document	19 2.3.10
p	Print the Document	20 2.3.11
q	Quit Back to BASIC	20 2.3.12
r	Replace a Single Phrase with Another Phrase	21 2.3.13
R	Replace an Exact Phrase Many Times (Global)	21 2.3.13
s	Save the GhostWriter Document to Disk	22 2.3.14
S	Save an ASCII File of the Document to Disk	22 2.3.14
t	Tone (Alter Screen Colors)	23 2.3.15
v	Verify Unrecognized Spellchecked Words	23 2.3.16
w	Width Screen Change (Override Document Width)	24 2.3.17
x	Change Disk Drive or Printer Device Numbers	24 2.3.18
$	Display a Disk Directory	24 2.3.19
DEL	Delete Text from the Document	25 2.3.20
INST	To Insert Text into the Document	25 2.3.21
RUN	Call Up the Spell Checker	25 2.3.22
SPACE	Display Number of Characters Free	26 2.3.23

2.3.2 Auto Pagination

GhostWriter does not BREAK pages as you type, but instead allows you to make adjustments as to the number of lines in a page.

Command: CBM a

Sequence: After issuing the command, type in the number of lines per page at the "Lines per Page:" prompt, and press RETURN.

Options: Paragraphs are split or left intact based on the Pagination Option used in the second column of the format line.
(Pagination Options are described in section 2.2.14 on page 14)

2.3.3 Copy Text from One Part of a Document to Another

Pieces of text can be copied from one location of the document to another.

Command: CBM c

Sequence: Position the cursor at the start of the text to be copied. Press the command (CBM c). At the prompt "Copy What?" highlight the text to be moved using the CRSR keys, and press RETURN. Now at the "To Where?" prompt move the cursor to the beginning of the new location and press RETURN.

Notes: Text can be copied across page boundaries, by pressing F1 or F2 (page forward, page backawrds) during the "To Where?" prompt. Text can be copied TO and FROM the Work Page. Text can be copied FROM the Header and Footer Pages but not TO them. If the cursor is moved backwards past the original starting location of the copy during a highlighting, the command is aborted.

2.3.4 Disk Commands

Many disk operating system (DOS) commands can be issued from GhostWriter. These commands are fully illustrated in your Disk Drive Manual. Disk files can be scratched (deleted), or renamed using this command. It is also possible to format a blank diskette using this command.

Command: CBM d

Format Sequence: To FORMAT a blank data diskette; After issuing the command (CBM d), type "n0:" at the "=>" prompt. Continue on by typing a disk name. The disk name can be no longer than 16 characters long. Now type in a comma "," followed by a two digit ID code, and press RETURN.

For Example: => n0:Jim's GhostFiles,a1 (RETURN)

Scratch Sequence: To SCRATCH (delete) a document from disk; After issuing the command (CBM d), type "s0:" at the "=>" prompt. Finish the line by typing the name of the file to delete, and press RETURN.

For Example: => s0:old file (RETURN)

Rename Sequence: To RENAME a document on diskette; After issuing the the command (CBM d), type "r0:" at the "=>" prompt. Type the new name for the file, followed by an equal sign "=", followed by the old name of the file. Press RETURN.

For Example: => r0:new file=old file (RETURN)

Note: It is suggested that only files saved in the ASCII format be renamed. Normal GhostWriter files contain the name of the file in the 200 byte header block within the saved document.

2.3.5 Find a Series of Characters

There are a couple of ways to search for a specified sequence of characters. One way is to search by exact match, the other way is by any letter case combination. Upon finding the desired sequence of characters, the cursor will be placed at the start of the sequence. If no sequence is found, the cursor will be at the end of the document.

Command: CBM f or CBM F

Sequence: Press and release the CBM key, followed by "f" to find an exact match or "F" to match on any letter case (upper/lowercase) combination. Type in the desired character sequence (Maximum of 28 Characters) at the "Find What?" prompt and press RETURN. Once a sequence is found, pressing STOP will halt the search process. A RETURN will continue the search for the next sequence.

Notes: The find command starts searching from the current cursor location, thus if the search is taking place for the first time, move the cursor to the beginning of the document. The sequence of characters in the "Find What?" prompt is remembered so that when the FIND command is re-issued a quick RETURN can be done to find the next sequence. Format symbols can also be searched for in a document by pressing and releasing the CONTROL key followed by the format symbol letter during the "Find What?" prompt.

2.3.6 Go to a Page

Besides document pages, there are three other pages that are used in Ghostwriter: The Work Page, the Header Page, and the Footer Page. The Go to a Page command can be used to position the cursor to the top of any requested page.

Command: CBM g

Sequence: After issuing the command (CBM g) enter the required page number at the "Go to Page:" prompt, and press RETURN.

Notes: To go to the Header Page, enter "h" as the page number.
To go to the Footer Page, enter "f" as the page number.
To go to the Work Page, enter "w" as the page number.

(More on Header, Footer, and Work Pages in sections 2.4.3 / 2.4.4 on pages 27 & 28)

2.3.7 Move Text from One Part of a Document to Another
Pieces of text can be moved from one location of the document to another.

Command: CBM m

Sequence: Position the cursor to the start of the text to be moved. Press the command (CBM m). At the "Move What?" prompt, highlight the text to be moved using the CRSR keys, and press RETURN. Now at the "To Where?" prompt move the cursor to the beginning of the new location and press RETURN.

Notes: Text can be moved across page boundaries by pressing F1 or F2 during the "To Where?" prompt. Text can be moved TO and FROM the Work Page. Text can only be moved FROM the Header and Footer pages, not TO them. If the cursor is moved backwards past the original starting location during a highlighting, the command is aborted.

2.3.8. Merge Documents from Another File
Documents stored on disk can be merged into the document currently in memory. Individual pages or ranges of pages can be selected. This command can also merge files from other word processing programs such as Wordpro and HesWriter.

Command: CBM M

Sequence: Position the cursor to the start of the location where the merged text will be inserted. Press and release the CBM key, followed by "M" (shifted m). At the "Merge:" prompt, type the name of the file to be merged and press RETURN. Type the page number of the first page to be inserted at the "Page:" prompt and press RETURN. Now type the page number of the last page to be inserted at the "To:" prompt, and press RETURN. The selected text is then inserted into the document.

Notes: Any type of SEQ (sequential) file can be merged by typing "s" at the "Page:" prompt and pressing RETURN. HesWriter, and Easy Script files can be merged in this way.

Wordpro files can be merged by typing "wp4" or "wp8" in the "Page:" prompt and pressing RETURN. This will merge in a wordpro (4)0 or (8)0 column file respectively.

Microscript files can be merged by typing "m" at the "Page:" prompt and pressing RETURN.

Wordcraft chapters can be merged by typing "c" at the "Page:" prompt and pressing RETURN. Wordcraft embedded controls wil be removed.

Disk directory listings can be merged by typing "$*" at the "Merge:" prompt and pressing RETURN three times.

2.3.9 Start a New Document

A way to delete the existing document in memory is to start a new one. The new document will be completely blank and will not have a name.

Command: CBM n

Sequence: Press the command (CBM n) and the "New Document?" prompt will appear. If changes made to the existing document have not been saved, a message prompt "CHANGES NOT SAVED - Continue y/n?" will be displayed. This is only a prompt to remind you that changes have not been saved. If you wish to continue with the command, press "y" to continue. If you wish to stop before clearing the document in memory, press the STOP key, and perform the necessary SAVE functions.

Note: A RETURN can be substituted for "y" to continue the command. Any other key will abort this option.

2.3.10 Open an Existing Document

To retrieve a stored Ghostwriter file from diskette, it must be OPENed first. This command is only used for loading Ghostwriter files back into the memory of the computer. Once in memory the file can be edited or printed.

Command: CBM o

Sequence: Press the command (CBM o) and the "Open Document" prompt will appear. If changes made to the existing document have not been saved, the message "CHANGES NOT SAVED - Continue y/n?" will be displayed. If you no longer need the existing document, press "y" and proceed to type the name of the file to open in the "Name:" prompt of the screen heading, and press RETURN. If you would like to save the existing document first, press the STOP key and perform the necessary SAVE functions.

Notes: A RETURN can be substituted for "y" to continue the command. Any other key aborts this option.

OmniWriter documents may be loaded into memory using the OPEN command.

2.3.11 Print the Document

To print all or a selected range of pages starting from the current document, to optionally print GLOBALLY linked files. Also used to select MAIL MERGE text from the Work Page into the main document.

Command: CBM p

Sequence: After pressing the command (CBM p), the print options screen will be displayed. Move the cursor onto any option by using the CRSR Up or CRSR Down keys, and alter each as required, and press STOP to return back to editing, or press the F1 key to commence printing.

While printing, continuously HOLD the RUN/STOP key to suspend printing. (It may take the printer some time to acknowledge this request from the computer to stop printing so HOLD the key until the printer stops.) To continue printing again, press SPACE. To restart the current page press the HOME key. To abort the print completely, press and hold F1 until printing comes to a halt.

Notes: All print options (except for page ranges) are automatically stored with the document after issuing the SAVE command. When the document is recalled it is not necessary to set these options again.

(Print Options are fully explained in Document Printing, section 2.5 page 30)

2.3.12 Quit Back to BASIC

To finish a session of GhostWriting, it is possible to go back to BASIC without turning off the computer.

Command: CBM q

Sequence: After pressing the command (CBM q), the "Quit Back to BASIC" prompt will be displayed in the screen heading. If changes to the document have not been saved to disk, the prompt "CHANGES NOT SAVED - Continue y/n?" will appear. If the there is no need to save the document in memory, proceed by pressing "y". If however you would like to save the document in memory, press the STOP key and perform the necessary SAVE functions.

Note: A RETURN can be substituted for "y" to continue the command. Any other key aborts this option.

2.3.13 Replace Text

There are a couple of ways to replace a series of characters with another series of characters. One way is to replace the text once, and another way is to globally repeat the process throughout the document.

Command: CBM r or CBM R

Sequence: Position the cursor to the start of the text to be replaced. Press the CBM key followed by "r" to replace the phrase one time, or "R" to globally replace all other instances. At the "Replace What?" prompt, highlight the text to be replaced (a maximum of 28 characters can be replaced at one time) by using the CRSR keys, and press RETURN.

The prompt will change. Now type the new text (Maximum of 25 Characters) at the "Replace What?" prompt and press RETURN. The phrase will be replaced at that moment.

If performing a Global replace, press RETURN again to find the next instance of the phrase. When the next phrase is found, press RETURN to replace, or press SPACE to skip this instance and find the next instance.

At anytime during Global Replace a SHIFT/RETURN may be issued and that will automatically replace all subsequent instances of the highlighted text. Pressing the STOP key will halt the replace process.

Notes: The replace command starts from the current cursor location, thus if replacing for the first time, start from the beginning of the document.

To quickly find the replacement phrase of a document, use the FIND command before issuing the REPLACE command. A maximum of 28 characters will be replaced, even if more than 28 characters were highlighted.

The sequence of characters typed in the "Replace With?" prompt is remembered so that when the REPLACE command is re-issued a quick RETURN can be done to get to the next sequence. Pressing and holding the DEL key can be done to clear out the remembered "Replace With?" prompt.

Format symbols can be used within the replacement phrase by pressing and releasing the CONTROL key followed by the letter used to create that symbol.

Notes: While globally replacing, the search will continue for either an exact match, or an any letter case match. This search match is determined by the last FIND command issued.
(See section 2.3.5 page 17 for more on FIND.)

2.3.14 Save the Document to Disk

There are two ways to save GhostWriter documents. One way is to save it as a normal GhostWriter document, and the other way is to save the document as an ASCII file. Only the normal save can be loaded back in as an actual GhostWriter file; the ASCII file must be loaded in via the MERGE a document command.

Command: CBM s or CBM S

Sequence: Insert a data disk into the disk drive. (If you have not formatted a data disk, see section 2.3.4 on page 16.) Press the CBM key followed by "s" to perform a normal save, or "S" (shifted s) to save the document as an ASCII file. At the "Save Document" or "Save as ASCII File" prompts, type the name of the file under the "Name:" prompt in the screen heading and press RETURN.

If the file exists on disk, GhostWriter will overwrite the existing file by replacing it with the newly saved document. To double-check and see if the file already exists on the diskette, press the STOP key (to exit the "NAME:" prompt) and press the CBM key followed by "$" (shift 4). Press the SPACE bar (if more file entries need to be displayed) until all filenames have been looked at. You may now re-issue the save command this time typing in a different filename if you don't wish to overwrite the existing file.

Notes: Both file options save in the SEQ (sequential) format.

Files saved under the ASCII option (CBM S) contain none of the typical format symbols used in GhostWriter. ASCII files strictly contain text; Alpha/Numeric characters, punctuation characters, and carriage Returns. These files are NOT GhostWriter files and CANNOT be loaded back into memory via the OPEN command.

Files saved in the ASCII mode can only be loaded into memory using the MERGE command. These documents once in memory will not have any of their format symbols that they once had.

Files saved under the normal save function (CBM s) contain all the necessary format symbols and document information including the print option settings and user/default color settings. Files saved under the normal save option can be loaded back into memory by using the OPEN command.

(Document file format is fully explained in Appendix E on page 70)

2.3.15 Alter Screen Colors (Tone)

The ability to produce a more appealing display or to "color code" documents for whatever reason exists using the TONE command. The TONE colors are retained with a GhostWriter file once saved.

Command: CBM t

Sequence: After issuing the command (CBM t), a menu will appear in the screen heading, "F1=Text F3=B/Grnd F5=Heading Tone?". The function keys are used to cycle through the colors desired. Press F1 to alter text color, F3 to alter background color, or F5 to change the heading color. Pressing F7 will reset the colors to the original default colors. Press the STOP key to end the command.

Notes: 80 column default colors are green heading with yellow text on black background, while 40 columns are lt. gray text on blue background with lt. gray heading. Those with systems using monochrome monitors will want to change these colors to simple black and white. Certain color combinations will seem to make the text or screen headings disappear. Be certain that the background color is not the same as the text or the screen heading. Avoid the color yellow for background settings. Yellow is used for all system prompts. Color cycle order is below.

80 Column: Black, Green, Red, Yellow, Blue, Cyan, Purple, and White.
40 Column: Black, White, Red, Cyan, Purple, Green, Blue, Yellow, Orange, Brown, Pink, Dk.Gray, Med.Gray, Lt.Green, Lt.Blue, and Lt.Gray.

2.3.16 Verify Unrecognized Words in the Document

After having gotten a list of all unrecognized words from the spell checker, the verify command can be issued to search for these words. After finding one of these words a number of options can be performed.

Command: CBM v

Sequence: After going through the spell check procedures and returning back to the GhostWriter document, issue the command (CBM v). The message "Verifying..." will be displayed. When an unrecognized word is found, that word (or part word) will be highlighted and the menu "Edit, Skip, Accept, or Learn this word?" will appear in the screen heading. Select one of the menu options by pressing the first letter of that option. Depending on that option selected, the verify process will either continue or will be halted. If the process is halted, just re-issue the command to continue. To stop the verify process, press the STOP key.

Notes: The verify command starts verifying from the current cursor location, so if verifying for the first time, issue the command at the beginning of the document. (CBM g 1 will move the cursor to the start of document.)

(Verify options are detailed under Verifying the Document, section 3.1.6 page 44)

2.3.17 Override Page Width

At times, you may have "hidden" text that goes beyond the 40 or 80 column limitations of your screen. Using the override width command can make that "hidden" text visible.

Command: CBM w

Sequence: Press the CBM key followed by "w". While in Override Width Mode, the "W" in the word GhostWriter will be highlighed in the upper left part of the screen. To cancel override width, simply issue the command again.

Notes: This command will in effect override the right margin of the the format line to default to the number of columns of the screen. If the right margin is less than the number of columns of the screen, issuing the CBM "w" command will not change the display of the screen. Text can be edited while in Override Mode, however before printing or saving the document DO NOT FORGET TO TURN THIS COMMAND OFF.

2.3.18 Change Device# of Disk Drive or Printer

Those with systems using more than one disk drive, or a printer with a different device number can make use of their equipment by changing device numbers.

Command: CBM x

Sequence: After issuing the command (CBM x), continue on by typing "d" for a disk drive change, or "p" for a printer device change at the "Device/Drive?" prompt. Follow by typing the new device number and press RETURN.

Notes: Legal entries for disk drive are 8 or 9 for device#, or 0 or 1 for drive#.
Legal entries for printer device numbers are 4, 5, or 6.
Default settings are 8 for disk drive device# and 4 for printer device#.

2.3.19 Display Disk Directory

The ability to see the directory of a diskette while inside GhostWriter is available. Using this command can also allow for easy OPENing (loading) of files.

Command: CBM $ (Shift 4)

Sequence: After issuing the command (CBM $) the first page of the directory entries of the diskette will be displayed on the screen. If there are more directory entries to be listed the prompt "More... Press Space Bar" will be displayed. Otherwise the prompt "Press Space Bar" will be displayed. Press the STOP key to return back to GhostWriter.

Note: While viewing the directory, files can be loaded by moving the cursor with the CRSR keys and pressing RETURN on the selected entry. You can also use the cbm key and then return to display the directory.

2.3.20 Delete Text from the Document
Large sections of a document can be deleted fast and quickly using this command.

Command: CBM DEL (INST/DEL key)

Sequence: Position the cursor at the start of the text to delete and issue the command (CBM DEL). Use the CRSR keys to highlight the desired text to be deleted. Press RETURN to perform the delete.

Notes: Page boundary keys (F1 through F4) can be used to highlight text during the delete process. If the cursor should be moved backwards past the original starting point of highlighting, the DELETE command will automatically abort. The F7 key can also be used to initiate the delete process.

2.3.21 Insert Text into the Document
To insert a section of typed text into the document.

Command: CBM INST (Shift INST/DEL key)

Sequence: First position the cursor to where the new text will be inserted. Issue the command and type text to be inserted. Press the STOP key to end.

Notes: Editing can be done while inserting as long as the edit is to take place on the current line being inserted. The cursor cannot be moved from its current line while inserting. The F8 key can also be used to intiate the insert text process.

It is not necessary to use insert for inserting at the end of a page, or at the start of a blank line with a return symbol in it.

2.3.22 Call Up the Spell Checker
To initiate the spell checking process, the spell checker needs to be called up from within Ghostwriter.

Command: CBM RUN (Shift RUN/STOP key)

Sequence: After issuing the command (CBM RUN), the screen will change and the spell checker will process the document extracting all unique words and placing them in an alphabetical order. These words can be viewed and spell checked at this point.

Note: The spell checker can also be called up to perform a dictionary search to see if a known word or series of words exist in the current dictionary.

(The spell checker is fully explained in The Spell Checker, section 3.1 page 41)

2.3.23 Display Number of Characters Free

To keep a track of remaining memory, the number of characters left (or bytes free) can be displayed.

Command: CBM Space Bar

Sequence: Press and release the CBM key followed by the SPACE BAR. The number of characters free will be displayed in the screen heading.

Notes: Approximately 63,000 characters of document memory is available. Each typed character occupies one character of document memory. When document memory has been used the message "Insufficient Memory" will be displayed. The spell checking procedure uses the remaining memory left in the computer to create a list of unique words. "Insufficient Memory" will also be displayed if there are not enough characters free to create the unique word list.

Large volumes of text can be split into several GhostWriter documents. A GLOBAL print option allows the "linking" of document files to be printed as one continuous file.

(Global printing is described in Global/Fill, section 2.5.13 page 34)

2.4 DOCUMENT PAGING

Besides using the CRSR (cursor) keys, there are a number of ways to move around with-in a document. This section will discuss those ways of moving, and will also describe the "other" pages (Work, Header, and Footer) that can be used in GhostWriter.

2.4.1. Next Page/Previous Page

The ability to move from one consecutive page to another is helpful when wanting to step through a document one page at a time.

Keys to Press: F1 or F2 (Shifted F1)

Description: Press F1 to move the cursor to the top of the next page.
Press F2 to move the cursor to the top of the previous page.

It is possible to move into the Work Page by pressing F2 from Page 1. Similarly, pressing F1 from the Work Page will return the cursor back to Page 1. The Header and Footer pages can be left FROM, but cannot be moved TO using the F1/F2 keys, thus preventing accidental entering of text into the header and footer pages.

2.4.2 Next Screen/Previous Screen

At times you may want to step thru the document one full screen length at a time. This makes it easy to review a document, especially if the override width command is used for those who have more columns of text than their system screen allows.

Keys to Press: F3 or F4 (Shifted F3)

Description: Press F3 to move forward one full screen length.
Press F4 to move backwards one full screen length.

These commands can cross over page boundaries, and operate under the same guidelines as the Next Page, and Previous Page keys.

2.4.3 Top of Page/Bottom of Page

To quickly move the cursor to either the top of a page or the bottom of a page, the following keys can be pressed.

Keys to Press: CLR/HOME or Shifted CLR/HOME

Description: Press the CLR/HOME key twice to get to the top of a page.
(Pressing CLR/HOME once moves to the top of the screen.)
Press Shifted CLR/HOME to move to the bottom of the page.

2.4.4 Beginning of Line/End of Line

The ability to jump from the beginning of a line to the end of a line when wanting to quickly view the end of a sentence which may be off the screen.

Key to Press: F6 (Shifted F5)

Description: Press F6 to move the cursor to the far right end of a line. Pressing F6 again will move the cursor back to the beginning of the line.

2.4.5 Move to a TAB Stop or End of Line

A number of TAB stops can be set in the format line to allow for quick cursoring across a document. If no TAB stops are set, the cursor will jump to the end of the current line.

Key to Press: F5

Description: Press F5 to move the cursor according to any preset TABS in the format line. This command is only intended for cursoring and is not the same as performing a TAB. (See Tab Stops, section 2.2.5 page 11)

2.4.6 The Header & Footer Pages

Header and Footer pages are extra pages in a document that can be exercised at your option. Although the pages are similar, each operates a little different than the other. These pages are intended to be used during the printing process. Header pages print at the beginning of each page in a document, while the Footer pages print at the bottom of each page.

Keys to Press: CBM g h RETURN or CBM g f RETURN

Description: The GO TO PAGE command is used to enter either page. At the "Page:" prompt, enter "h" to go into the header page, or "f" to go into the footer page, followed by RETURN.

A single line is present in each page, but this line can be deleted. Text can be typed into these pages just as if they were part of the normal document; all control codes and format symbols will work, and any number of lines can be entered . While printing, the text in either of these pages is repeated on every page.

Header pages are suppressed and will not print out until the "Header Page:" print option is set to "y". Default is set to "n" which is the same as not needed.

Footer pages are always present. These pages automatically print out whenever they contain text. If the footer page is blank, nothing is printed.

2.4.7 The Work Page

An additional page that exists within GhostWriter is the Work Page. Although its primary function is to hold "variable data" such as names and addresses for Mail Merging applications, the Work Page can also be used as a "HELP" page to store notes or comments about a particular document. Other uses may be to hold a number of different format lines for specific applications, or hold a list of names that will receive the document. All information in the Work Page is retained with the document once SAVED to disk.

Keys to Press: CBM g w

Description: The GO TO command can be used to enter the Work Page. At the "Page:" prompt, enter "w" followed by RETURN.

Any number of lines can be typed in the Work Page. Text can be moved into and out of the Work Page, but any text within the work page cannot be printed.

Each piece of "variable data" (to be used for Merging into the main document) should begin with a Merge symbol. Groups or sets of data should be seperated with a Don't Merge symbol. (Mail Merging is fully explained in section 2.6, page 37)

2.4.8 Printing the Page Number Automatically

By typing the format symbol for the page number identifier (CONTROL #) in a Header or a Footer page, it is possible to have automatic page numbering. During a print out, each consecutive page printed will "update" the page number identifier, and will substitute the current page number for the format symbol.

Keys to Press: CONTROL # (shifted 3)

Description: After having gone to the Header or Footer page using the GO TO command, (CBM g h or CBM g f), type any optional text that might be necesarry to "accent" the page number, followed by the CONTROL key and the "#", followed by any other auxilary text.

Example: To get the effect of this page number 29 below, type the following into the Footer Page...
CONTROL "c" followed by "Page " and then CONTROL "#".
(The codes for Emboldening on your printer could be included.)

Because the Footer Page is printed at the bottom of every page during a print-out, this makes for an easy way to perform page numbering.

Page numbering can start from any number as prescribed by the "Page# Label" print option. If files use page numbering and are "linked" together during a print-out, the first printed page number of the next file will continue from the last printed page number of the last file.

2.5 DOCUMENT PRINTING

This section describes the general characteristics of printing a document. The following pages will list all of the print options available, and how each is used.

2.5.1 The Print Option Screen (Default Values)

Command: CBM p

Sequence: Press and release the CBM key followed by "p" to display the print option screen.

- Print Options -

Printer Type: v	Copies: 1
Form Feed: n	Auto L/feed: y
Paper Length: 66	Single Sheet: n
Start Column: 1	Header: n
Pitch Setting: 1	Lines/Inch: 6
Justification: n	Global/Fill:
File:	Page# Label:
Start Page: 1	End Page: 999

- Press F1 To Print -

Selecting & Editing: Use the CRSR Up/Down keys to move the cursor from one option field to another. Pressing RETURN will move to the next option. To change an option, simply type over the highlighted value. The INST and DEL keys can be used to edit some of the option entries.

Notes: To return back to the document without printing, press the STOP key. Re-issue the command (CBM p) to get back to the option screen. (Any changes made in the option screen will be remembered upon returning.) With the exception of the start and end page numbers, all print options are retained with the document once the file is SAVED.

2.5.2 Printer Type

Ghostwriter can support a number of different printers. Each printer has an associated letter that should be used to indicate the printer type. Initially, the printer type is set to "v" (lower case), which stands for the VIC-1525 printer. Here is a list of letter codes that will work for other printers...

v - VIC 1525/1526, CBM Printers, and Seikosha GP Models
e - EPSON MX/RX/FX80 Series, and GEMINI Models
q - QUME/DIABLO Models
s - NEC SPINWRITER Models
t - TRIUMPH ADLER TRD170 Series
f - RICOH FLOWRITER Models
a - ASCII Printers

Notes: The printer type selected has an effect over printer related codes in your document. For those codes that do not seem to work, please consult your printer manual for the proper ASCII codes required to send for that particular operation and follow the instructions for Assigning ASCII Printer Codes, section 2.2.11 page 13.

Use the letter code that works best for your printer. If your printer is not listed, or certain format codes seem to be ignored during printing, best chances are with using the letter code "a" for ASCII.
(More on Printer/Interface Configurations, section 2.5.19 page 36)

If the printer type is entered in lower case, printer output will be from the 6-pin serial connecter. (Same as the disk drive port/interface.) Although GhostWriter does not support RS232-C Serial printers, there is a way to divert output for printers connected to the user port. Simply reply with an UPPER CASE selection for the letter code.
Example: For an EPSON printer connected to the user port, enter "E".

2.5.3 Multiple Copies

The assumed value for the selection "Copies:" is one. To print out the document more than once, select the entry and type in the number of copies desired.

2.5.4 Form Feed

A form feed is a special character (in ASCII, decimal 12) that can be recognized by most printers. (Most CBM printers do not recognize this feature.) A form feed will cause the printer to align the paper to the top of form of the next page.

Entering a "y" at the "Form Feed:" print option will cause a form feed character to be printed at the end of every Footer Page end symbol. Otherwise, entering an "n" will skip to the next page by performing line-feeds.

Note: For printers that are faster at form-feeding than line-feeding, it may be useful to select "y" at the "Form Feed:" entry.

2.5.5 Auto L/Feed

An automatic line feed is a feature that causes the printer to space a line AFTER returning a carriage, (RETURN). Many printers/printer-interfaces have a switch, (which is usually inaccessible from the outside), that can turn auto line-feed on or off. Most CBM printers have a fixed setting with auto line-feed on.

If your printer is set to auto line-feed, enter "y" for the "Auto L/Feed:" selection. If your printer does not line-feed, enter "n". If you are not sure, experiment by printing a few lines with the option in both selections.

Notes: This option can be used to produce double line-spacing drafts. If you normally enter a "y" then enter an "n" to double space. If you normally enter an "n" then enter an upper case "N".

For those who are getting undesirable double line-spacing, try the opposite selection being used, or check the printer (and/or interface) for an auto line-feed switch and change the switch to the other position. Before attempting to print out again, make sure to turn the printer off and then back on again. This will properly reset the printer (and/or interface) and any switches that were changed will now be correctly set.

2.5.6 Paper Length

Paper length helps determine when a page ends and when a new page begins. Paper length is measured in lines, so keep in mind that when the lines per inch option is changed, the physical size of the printable paper length is changed as well. For example: For 11 inch paper at 6 lines per inch... paper length should be set to "66".

Enter the number of lines at the "Paper Length:" option to change the default value of 66 lines per page.

Note: If printing on continuous stationary or a continuous sheet of labels, it is important to make sure that the paper length setting is correct. Failure to do so will result in text "moving down" as each page prints.

2.5.7 Single Sheet

Depending on your printer, and the current application you are using, you may need to hand feed single sheets of paper into your printer. This option allows your printer to either pause printing after every page, or to continuously print page after page until the entire document is finished.

Enter an "n" to continuously print, or enter a "y" to pause at the start of each page.

Note: While PAUSED you can skip over the next page completely by pressing the CLR key, allowing for individual pages to be printed instead of the entire document.

2.5.8 Start Column

This option allows for the blank-spacing up to a particular column number before printing each line. It could be called the printer's left margin.

Enter the number of additional spaces for a new offset left margin by entering the number of the starting column in the "Start Column:" option.

2.5.9 Header

A document with multiple pages may want to have the same heading at the top of every printed page. This option is more like a switch to turn headings on or off.

To print out text from the Header Pages onto every page in a document, enter a "y" at the "Header:" selection. Otherwise, enter an "n". Default value is "n".

(See the Header & Footer Pages, section 2.4.6 page 28)

2.5.10 Pitch Setting

"Pitch" is the term for characters per inch (across on a line). A number of letter quality printers have the ability to change pitch. The Qume/Diablo, Spinwriter, Triumph, and Ricoh Flowriter printers can all change pitch. Rather than typing in the actual pitch value, 3 fixed pitch codes have been created to use.

Enter the fixed code at the "Pitch Setting:" option for the proper setting desired...

Code	Pitch Setting
1 -	10 characters per inch
2 -	12 characters per inch
3 -	15 characters per inch

Note: Epson printers can select normal printing by entering a "1", emphasized printing by entering a "2", and condensed printing by typing a "3".

2.5.11 Lines/Inch

The number of lines printed per (vertical) inch of paper can be altered. This option affects the paper length option. Three values are available to use.

Enter a "6", "8", or "12" at "Lines/Inch:" for that many printed lines per inch.

Note: Not all printers can take advantage of this feature. Consult your printer manual to see if this feature is available.
(VIC printers do not have this feature.)

2.5.12 Justification

Normally text is justified against the left margin. The last characters at the end of a line usually end in different columns, leaving "ragged" right margins. Justification is the adding of spaces in between words to make the ends of each line align in the same column (right justified).

Enter a "y" in the "Justification:" option to select Justify On. Otherwise enter an "n" to select Justify Off. The default is set to "n", Off.

Note: When justify is on, the blank spacings are distributed evenly between words to make the ends of each line align in the same column. Ending columns are set according to the right margin in the format line.

2.5.13 Global/Fill

The Global/Fill is actually two options: Global linking of files on disk for printing, or Filling of Mail Merge blanks with data from the Work Page or other sources. The letter code used determines what option is being executed.

Code	Option
g -	Allows Global linking of files* on disk for continuous printing.
f -	Fills merge blank pieces with data from the Work Page.
v -	Fills merge blank pieces from a GhostWriter file* on disk.
s -	Fills merge blank pieces from a SEQuential file* on disk.

Note* Filename is required in the "File:" print option prompt.

Global: If you wish to print several documents as one continuous document, enter a "g" in the "Global/Fill" option for ALL DOCUMENTS that are to be globally "linked", except for the last one. You must specify the name of the next file to be printed by entering it in the "File:" prompt.

Note: When globally printing, each document will be successively recalled from disk into memory and printed. If the first document is changed, it is automatically saved before recalling the next document.

Fill: Pieces of information held in the Work Page can be "filled" into merge blanks of a document by entering an "f" in the "Global/Fill" option. (Also see Options under sections 2.5.16-17, page 35 for "filling".)

Enter a "v" to merge information from a GhostWriter file, or enter an "s" to merge information from a SEQuential file. Both these types, require the file name to be specified under the "File:" prompt.

Note: Selecting any one of these fill options will cause the main document to re-print until all the information from the info source has been used . (See Mail Merge/Document Filling, section 2.6 on page 37)

2.5.14 File

This option is more like a prompt that is used in conjunction with the Global/Fill entry. Only the names of files on disk should be entered in the "File:" prompt.

When the Global/Fill option contains a "g", the "File:" prompt must contain the name of the next document to be printed.

When the Global/Fill option contains a "v" or an "s" for Mail Merging from an outside source, the "File:" prompt should contain the name of the relevant file.

2.5.15 Page# Label

This option allows for the first page number identifier (CONTROL #) to start at a specific page number. Otherwise, the first page number is one (1).

Enter the number for the first printed page of the document in the "Page# Label:" option. All subsequent pages will be updated as each page is printed.

Note: Documents that are linked and have an entry in the Page# Label will begin page numbering based on the entry in the Page# Label option.

2.5.16 Start Page

This option is used to indicate the beginning of a range of pages to be printed.

At the "Start Page:" option, enter the starting page of the document to be printed. Default value is "1", the first page of all documents.

Note: Starting page numbers are not retained with the document once SAVED.

Options: If "filling" merge blanks of a document from the work page ("f" in the Global/Fill option), this Start Page option is used to indicate the first "set" of a series of data held in the Work Page to be printed for Mail Merging. A "set" is considered to be all the text between the points of one Don't Merge symbol to the next Don't Merge symbol.

2.5.17 End Page

This option is used to indicate the ending of a range of pages to be printed.

At the "End Page:" option, enter the last page of the document to be printed. Default value is "999", the maximum length in pages for all documents.

Note: Ending page numbers are not retained with the document once SAVED.

Options: If "filling" merge blanks of a document from the work page, this End Page option is used to indicate the last "set" of a series of data held in the Work Page to be printed for Mail Merging. A "set" is considered to be all the text between the points of two Don't Merge symbols.

2.5.18 The Print Run

Printing: After all the print options have been set, press the F1 key to print the document. While the document prints, the screen will display the current page being printed. For printers and/or interfaces with large data buffers (memory), the screen will be "ahead" of the printer.

Note: If the printer is not properly plugged in, or not powered up, the text will be displayed in a "frozen" state on the screen. In this case, double-check all connections to and from the printer (including interfaces), and make sure that the printer is powered ON.

Stopping: If for any reason you need to stop the printer during a print-out, HOLD the STOP key down until the printer stops. (You must HOLD the STOP key down because the printer receives commands from the computer at restricted points during printing.)

Note: You can resume the printing where it left off by pressing SPACE. You may also restart the print-out by pressing the HOME key, or abort the print-out by pressing the F1 key.

The Print Run is finished when either the document is completely printed, or the printing has been aborted. When the document is fully printed, the screen display will be of the last footer page printed. When the printing has been aborted, the screen will display the document at the point where the print was cancelled.

2.5.19 Printer/Interface Configurations

Many printers and interfaces have optional switches that can be set to perform in a specific manner or mode. Some of these modes include...

- Device Number Selections
- Automatic Line-Feedings (On/Off)
- Selectable Character Set Fonts
- ASCII Correction Mode (CBM mode/Transparent mode)

Of all these modes mentioned, it is the ASCII correction mode that can cause the most confusing problems. Many third party (Non-CBM) printer and interface manufacturers provide an option to emulate CBM printers. If your printer or interface is emulating a CBM printer, your printer may be "locked-out" of certain features even if it normally has that feature. For example: Most CBM printers cannot underline, instead they produce REVERSED characters. To get this underline feature "back", it may be necessary to "turn off" the ASCII correction mode (turn off the CBM emulating mode), and leave the printer and/or interface in a Transparent mode (a non-CBM emulating state).

Note: If your printer/interface is emulating CBM mode (and you prefer that mode) enter a "v" under the "Printer Type:" option of the print options screen. However while in transparent (non-CBM) mode, entering an "a" may work better.

2.6 MAIL MERGE/DOCUMENT FILLING

What is Mail Merging? Mail merging is one of the most common types of large volume operations that a good word processor is expected to perform. Documents are printed out over and over again but with different names and addresses neatly inserted into the document as if all typed by hand.

Mail merging is actually a two-step process...

Step 1) Mail Merge blanks are created in the document.
Step 2) Mail Merge blanks are filled. (From the Work Page or other sources)

Note: At times, Mail Merging is refered to as "filling" because mail merging is the filling of blanks in a document with data from an information source.

2.6.1 Creating Mail Merge Blanks

Mail Merge blanks do not necessarily have to be filled with just names and addresses, but they can also be filled with reference numbers, salutation greetings, or whatever is desired.

Identify which parts of the document will require variable information. Type your letter or document as you normally would, however type a MERGE symbol (CONTROL m) where a variable piece of data should go. This will create a Mail Merge blank. Create a blank for every entry to be filled.

The following examples illustrate two types of letters using mail merging...

A business letter:

(↕)(◀)
(↕)(◀)
(↕)(◀)
(↕)(◀)

Ref: (↕)(◀)
January 1, 1986 (◀)

Dear (↕), (◀)

We are pleased to annouce our new product line for the new year. Please take a look through it, and let us know if any of our exciting new products interests you. (◀)

Yours sincerely, (◀)

New Product Director (◀)

A thank-you letter:

Dear (↕), (◀)

Thank you for the (↕) you gave us for our wedding. We are sure we'll make good use of it for years to come. (◀)

Love, Joe & Edna(◀)

2.6.2 Filling Mail Merge Blanks (From the Work Page)
After Mail Merge blanks have been created, they can be filled with variable information. Variable information can come from a number of sources, one of which is the Work Page. Information held in the Work Page must be in a defined format.

To type information pieces into the Work Page, first go to the Work Page using the GO TO command (CBM g w). Enter each piece of information by preceeding it with a MERGE symbol (CONTROL m). Continue to add pieces until the "set" (all the information for one letter) is finished. Finish the "set" by typing a DON'T MERGE symbol (CONTROL d).

The following variable data examples will correspond to the two previous letter examples...

The business letter variables:

(↕) Galaxy Business Machines (↕) 101 East Main Street (↕) Grub City, CA 90101 (↕) Attn: L. Smith (↕) 4-562-M (↕) Larry (↯) (◀) (◀)
(↕) Speed Diamond Motors (↕) 95 Garland Way Suite 11 (↕) Crayola, CA 90112 (↕) Attn: Purchasing Agent (↕) 4-319-L (↕) Gentleman (↯) (◀)

The thank-you letter variables:

(↕) Aunt Martha (↕) fondue set (↯) (◀) (◀)
(↕) Mom & Dad (↕) $500 (↯) (◀)

Each example shows how 2 "sets" would be created in the Work Page. Sets are divided by the Don't Merge symbols. Any information between a Don't Merge symbol and the next immediate Merge symbol is ignored during Mail Merge printing. (This makes it easier to read each set of information.)

Mail Merge blanks are not actually filled until it is time to print the document(s).

To print the letters, call up the print options screen (CBM p) and enter an "f" in the "Global/Fill:" option. If a selective range of sets is desired to be printed enter the first set number in the "Start Page:" option, and enter the last set number in the "End Page:" option. (In the Thank-You example, if you wanted to start with the second set (Mom & Dad, $500) you would enter a "2" in the "Start Page:" option.) Press the F1 key to begin printing.

Option: Another way to selectively print data sets from the Work Page is to enter a "y" in the "Single Sheet:" option, (ensuring that "Header:" is set to "n"). This will allow single sheet "stepping-through" of documents by pressing the CLR key. Once the desired set of information comes up, press SPACE to print the page out.

Note: The HOME key cannot restart a "filled" page correctly.

2.6.3 Alternative Information Sources

There are two additional ways to store variable information for mail merging. You may store each "set" of information in individual pages of an entirely seperate GhostWriter document, or merge information from a BASIC SEQuential disk file.

2.6.4 Merging Information from Another GhostWriter File

When filling from a GhostWriter document, you can select a range of pages to be merged. This will only select information contained within those pages of the document.

Enter a "v" in the "Global/Fill:" print option, and enter the name of the GhostWriter file in the "File:" print option prompt.

Note: When creating the information document, place the MERGE symbols in front of each piece in the usual manner, but instead of using DON'T MERGE symbols to split up the "sets" type a CONTROL "p", placing each set on seperate pages. This will make it easier to reference.

2.6.5 Merging Information from a BASIC SEQuential File

This source of information provides an interface to other software products such as database systems, and spreadsheet programs. This type of source file could even be created from a BASIC program.

Enter an "s" in the "Global/Fill:" print option, and enter the name of the sequential file in the "File:" print option prompt.

Note: Instead of requiring MERGE symbols to create information pieces, GhostWriter will consider each carriage return (CHR$ 13), in the sequential file as a MERGE symbol. There is no way to indicate "sets" using sequential files.

If you are creating information data from your own BASIC program, see Appendix G on ASCII equivalents for Format Symbols, page 72.

2.6.6 Skipping Over Unwanted Pieces of Information

In all cases of Mail Merge operations, you may enter a DON'T MERGE symbol ⚡ in the main document (the body of the document containing merge blanks, etc.) to IGNORE the next piece of information that would have otherwise been merged at the next MERGE symbol.

Example: If you wanted to use the same data information that was used in the business letter example on page 38, BUT you didn't need the REF numbers in this particular document, you could use the same data info by entering a DON'T MERGE symbol (CONTROL d) immediately after the 4th line of the business address blank in the body of the document. This would skip over the reference number data piece, and the next piece of information that would be merged would be the salutation.

III. SPELLCHECKER & OTHER UTILITIES

3.1 THE SPELL CHECKER

The purpose of the INTEGRATED spell checker is to provide a method to assure that your documents are free of both spelling and typing errors.

In addition to the 30,000 word dictionary already included, you may build and add to your own dictionary for special applications requiring technical words or proper names. The dictionary can be searched, so if you are doubtful as to the spelling of a word you can simply call up the spell checker from within GhostWriter and see if the word is in the dictionary.

Since the spell checker is called up from within GhostWriter, you can use the full editing facilities to correct mistakes within your document.

A word list is displayed from your document showing high usage words, the number of words, sentences, paragraphs and pages used. Once a document is checked you can have GhostWriter stop at each unrecognized word and then correct it, or if it is a new word mark it for addition to your USER dictionary later.

The USER dictionary is actually a normal GhostWriter document which makes it very powerful because it can be edited and printed so that you may add, delete or print out specific words using the word processor.

Also included with GhostWriter is a separate utility program to maintain your dictionaries with. It will also copy an entire disk so that you may make backup copies of your dictionaries and GhostWriter documents.

3.1.1 Calling Up The Spell Checker

To call up the spell checker, make sure your GhostWriter disk is in the drive and press and release the CBM key and then hold SHIFT and press the RUN/STOP key. This will load the spell checker.

If you do not have the right disk, you will be prompted with the message:

62, FILE NOT FOUND,00,00

Make sure you have your GhostWriter disk in the drive and try again.

Once successfully loaded, your document will be processed with all unique words extracted and placed in a separate alphabetical list. Various statistics will also be calculated and displayed once completed. For short documents this will take a few seconds while longer documents may require a minute or so.

Note: Since the unique word list is stored in the unused document memory you may need to split large documents into two pieces in order to spell check them. If there is not enough room the message "Insufficient Memory" will be displayed and only a partial list will have been completed.

3.1.2 Word Lists And Statistics

Once the word lists and statistics have been prepared the following screen will be displayed (of course, the statistics will vary depending upon your document):

```
F1  Spell Check Document
F3  Alphabetical Word List
F5  High Usage Word List
F7  Dictionary Search
F8  Return to Document

          - Statistics -

500 Words
298 Unique Words
50  sentences
25  paragraphs
2   pages
```

There are two types of lists: an alphabetical sequence and actual frequency list. Both are available for display at anytime while using GhostWriter. These lists contain the words used in the document under edit when calling up the spell checker. Both lists show the number of occurrences of each word.

The word lists will be displayed in two columns. After each screen is displayed press the SPACEBAR in order to proceed to the next page or press the STOP key TWICE to terminate the display and return to the current menu.

You will find these lists useful to determine the "density" of your documents. Since certain documents may be intended for quick reading by other people you may need to know how frequently long or obscure words are used. Also, you may find that some words are used repetitively and these statistics will enable you to adjust your style to suit the readers of your document.

3.1.3 Spell Checking The Document

The spell checker can now be instructed to check the document against the dictionary. Any words present in the USER dictionary will be treated as if part of the MAIN dictionary.

In order to check the document press the F1 key, insert the dictionary disk (if different from the one already in the disk drive) and press the SPACEBAR.

3.1.4 Unrecognized Words

As the spell check proceeds you will see each word highlighted, and when the word is located in the dictionary the word is de-highlighted. Words which remain highlighted were not found in the dictionary. Later you will be able to add any of these words which you desire to your dictionary. A mistyped or misspelled word can also be corrected later.

As the checking continues your document words will be displayed alphabetically in two columns so that you can see how the check is proceeding. Most documents will take about 4 minutes. Large documents do not necessarily take longer to check.

As your USER dictionary grows in size the checking will take longer but should never exceed 6-7 minutes. By using the utility program to merge your USER dictionary in with the MAIN dictionary this checking will be performed at optimum speed.

Upon completion of the spell checking the following message is displayed:

Spellcheck Complete - Press Space

Press the SPACEBAR and the following menu is displayed:

F1 Unrecognized Words
F3 Alphabetical Word List
F5 High Usage Word List
F7 Dictionary Search
F8 Alter Document

- Statistics -

500 Words
298 Unique Words
50 sentences
25 paragraphs
2 pages

In order to display a list of unrecognized words simply press F1. The list will be displayed in alphabetical order in two columns. If there is more than a screenful press the SPACEBAR to move onto the next screen. To stop the display and return to the menu press the STOP key TWICE.

If there were NO unrecognized words then both the F1 and F8 options will be different. Since all words were present in the dictionary the spell checking process is now complete. Press F8 to return to GhostWriter.

3.1.5 Correcting The Document

To correct your document or add new words to the USER dictionary press the F8 key (SHIFT F7) to go back into GhostWriter. You will be positioned back exactly where you left the document when you called up the spell checker, so you should GO TO PAGE 1 of your document (CBM g 1 RETURN) before issuing the VERIFY command.

The width command (CBM w) may provide a better display during this verification.

3.1.6 Verifying The Document

The VERIFY command is an additional command within GhostWriter which uses the list of unrecognized words to perform a search through your document from where the cursor is currently positioned. The command sequence is CBM v and will display:

VERIFYING...

Each page is displayed during this process and when an unrecognized word is found, this heading message appears:

EDIT, ACCEPT, SKIP, OR LEARN THIS WORD?

You will see that the word (or part word) is highlighted just as it was when the spell check was underway. You can now perform the following operations by pressing the corresponding letter or control keys:

EDIT	e	- Stop the verifying, so that the word can be edited for correction, re-typing or to alter the entire text.
ACCEPT	a	- Accept this word and continue verifying, if this word occurs again further on in the document don't STOP at it and DON'T add it to the user dictionary.
SKIP	s	- Skip over this word and continue verifying, if this word occurs further on in the document STOP and ask again.
LEARN	l	- Mark this word for addition to the USER dictionary and continue veriyfing.

Other Keys:	STOP	Same function as EDIT.
	RETURN	Same function as ACCEPT.

The VERIFY command is used just like any other GhostWriter word processor command. Remember to start from page 1 of your document OR, if you have text in the WORK page you should start there. Verify automatically goes through each page and will cancel itself upon reaching the end of the last page.

3.2 DICTIONARY FUNCTIONS

After unrecognized words have been verified in a document, it is possible to have selected some words to be "remembered" into a User Dictionary. This section will illustrate how words are added to the dictionary and will describe the aspects of the User Dictionary. This section also shows the many ways a word can be "looked-up" in a dictionary.

*Note: It is suggested that the dictionary be copied to an alternate disk before adding any new words.
(See section 3.3.1 on page 48 for more on copying the dictionary.)

3.2.1 Adding New Words To The Dictionary

If you have LEARNED any new words you should add them at this point to the USER dictionary. In order to do this you must first call up the spell checker (once again) from within THIS document. If you QUIT from the current document all knowledge of the LEARNED words is lost!

To call up the spell checker press and release the CBM key and the hold SHIFT and press the RUN/STOP key. Once loaded the following menu is displayed:

F1 Add to Dictionary
F3 Alphabetical Word List
F5 High Usage Word List
F7 Dictionary Search
F8 Return to Document

At this point you simply press the F1 key to automatically add your LEARNED words to the USER dictionary. Once updated the following message will be displayed:

User Dict. Updated - Press Space

If the disk you are using becomes full, the CBM DOS (disk operating system) message : 72,DISK FULL,00,00 will be displayed. If this occurs you will need to return to GhostWriter (Press F8), and free some space on the disk by deleting (scratching) some unwanted documents from the disk and spell check the document again.

If a major problem occurs such as a power failure, disk corruption etc. you may need to know how the ADD process operates in order to recover your USER dictionary. A detailed explanation follows which should only be required for those instances or for those people interested in how the user dictionary works.

After adding the LEARNED words the spell check process is complete. Press the F8 key to return to GhostWriter and your current document.

3.2.2 The User Dictionary

The USER dictionary is stored on the disk as a normal GhostWriter document and is called "SC.USER.DICT". When ADDING to the USER dictionary GhostWriter extracts the existing words from this document and then merges in the words just LEARNED. The new combined USER dictionary is then written out to the disk as "SC.USER.TEMP". When this has been successfully written to the disk the USER dictionary is renamed from "SC.USER.DICT" to "SC.USER.OLD" and the new USER dictionary is renamed from "SC.USER.TEMP" to "SC.USER.DICT".

In case of a catastrophe you may find that the "SC.USER.DICT" file no longer exists, however both "SC.USER.OLD" (the previous version of your USER dictionary) and the intermediary "SC.USER.TEMP" can be recalled as normal documents from within GhostWriter. These can be SAVED back to the disk and because they are known internally as "SC.USER.DICT" you will find that they are automatically renamed by GhostWriter during the SAVE process.

The "SC.USER.OLD" file is always maintained as the last version of your USER dictionary, so again if your "SC.USER.DICT" becomes corrupt or you simply wish to go back to the last version of your USER dictionary then EDIT and SAVE the "SC.USER.OLD" file and it will automatically become your current USER dictionary.

Do not SCRATCH (erase) either of these documents from your spell checker COPY disk. They are both required when spell checking. If they do disappear you should CREATE these documents in the normal way using GhostWriter.

If you wish to add your own words to the USER dictionary you can simply EDIT "SC.USER.DICT" as a normal GhostWriter document. You must enter your own words IN STRICT ALPHABETICAL ORDER. You can use any formatting symbols such as TAB and insert format lines to format your words into columns. You can also print this document using the GhostWriter word processor.

The USER dictionary should be able to contain some 3,000 words before it becomes too large to edit from within the word processor. GhostWriter will continue to let you add words to the USER dictionary up to virtually any size that will fit onto a disk in use.

However you should regularly MERGE your USER dictionary in with the MAIN dictionary using the supplied utility program. See page 50, 3.3.3, Merge User Dictionary for further details.

Because the GhostWriter dictionary files can be copied onto any new disk you may wish to create a number of spell checking disks and use them to store your documents on as well. This is exactly the way that GhostWriter should be used! You should delay this for a while until you have built a USER dictionary that contains the words which are special to your use, and then MERGE the USER dictionary in with the MAIN dictionary and then copy away.

3.2.3 Searching The Dictionaries

Both the MAIN and the USER dictionary can be searched for a particular word or group of words. You can also display the entire dictionary.

At any time when using the spellchecker the F7 key will allow you to specify a search sequence, for example:

Search For:antediluvian

If you wish to search for a particular word, simply type the word and press RETURN. If you want to search for all words beginning with a particular letter or group of letters then type the group prefix followed by an asterisk. For example:

Search For:a*

Will display all words beginning with the letter "a".

Search For:auto*

Will display all words beginning with the prefix "auto".

If you want to look for words of a specific length then you can specify a "wildcard" symbol which is the "?" question mark. Each question is used to match one letter.

Search For:?????

Would cause GhostWriter to search for and display all five letter words.

Search For:oc??r*

Will display all words starting with "oc" having any two following letters with a fifth letter of "r" and ending in any other letters. This is especially handy when you are unsure of a particular spelling and wish to display a limited number of possible words.

The display of words found in the dictionaries is shown in alphabetical order in two columns. Press the SPACEBAR at the end of the screen to display the next screen or press STOP twice to end the display.

III. SPELLCHECKER & OTHER UTILITIES

3.3 THE UTILITY PROGRAM

The utility program is used from BASIC rather than from within GhostWriter. Turn your machine off and insert the GhostWriter diskette into the drive. While holding down the ALT key (first upper row, third key) turn the machine on. The utility program will finish loading in either 15 or 40 seconds depending on the use of a 1571 or 1541 respectively.

The utility program once loaded will display the following menu:

F1 Copy Dictionary Disk
F3 Whole Disk Backup
F5 Create Empty Dictionary
F8 Exit Back to Basic

The first two operations are used to copy information from an existing disk to a BRAND NEW disk. Although the computer has a large amount of memory the disk can store more information than the computer can load at one time so information is read in sections. Both of these operations will require you to swap disks several times during the copying process. The COPY DICTIONARY operation will take two or more passes. The full disk backup will take several passes to complete.

The copying process may seem rather lengthy but you should always make regular copies of your dictionary and important documents.

3.3.1 (F1) Copy Dictionary Disk

Note: You should use this to create a copy of the spell checker and dictionaries from the GhostWriter disk before your first spelling check.

This option should also be used after MERGING your USER dictionary to create a brand new disk containing just the dictionary and the spell checker.

This option is much quicker than the backup option since it only has to copy the spell checker and your current dictionary.

The copy is performed in at least two stages. As your dictionary grows in size you will find that the copy takes longer and you may need to change the disks several times before the copy is finished.

You will first be asked for the name you wish to give to the NEW disk and its identification code which should be two unique characters.

3.3.2 (F2) Whole Disk Backup

This option is used to copy the ENTIRE contents of an existing disk (containing dictionaries or documents) to a completely fresh disk. You will be asked first for the name for the new disk and then its identification code.

Note that the disk you wish to copy is referred to as the OLD disk and the disk and the disk you are copying onto is referred to as the NEW disk. Any existing information on the NEW disk will be destroyed during this operation.

Before using this option place a WRITE PROTECT TAB on your OLD disk and be extremely careful when instructed to remove and insert disks. The back up will take several passes.

Note: It is a VERY good idea to make frequent backups of your document disks in the event of a catastrophe such as disk corruptions or spilled coffee! Having the data stored on a backup disk is probably much quicker than retyping it!

3.3.3 (F3) Create Empty Dictionary

This option is useful when you wish to build your own dictionary containing just the words you use. It will give you an indication of the size of your vocabulary or at least your written vocabulary (which may be quite different). By creating an empty dictionary and LEARNING words from your documents you can build a tailor-made dictionary for yourself which could possibly reduce the time taken to spell check if your resulting dictionary is smaller than the 30,000 word supplied dictionary.

As in the previous COPY operations you will be asked for the name and identification code for the NEW disk. Remember that any existing information on the NEW disk will be erased.

3.3.3 (F5) Merge User Dictionary

This option extracts new words from the USER dictionary and merges them into the MAIN dictionary. As the MAIN dictionary is held in a compressed form your total dictionary will require less disk space and be quicker to process if you regularly merge your USER dictionary.

Before using this utility you should first COPY (F1) the disk containing the MAIN and USER dictionary. Otherwise, if the disk becomes full or corrupted in some way you may lose a part of your MAIN dictionary.

Simply insert the disk containing the dictionaries to be merged and the utility will go through each dictionary letter until complete. If you have placed a word in the USER dictionary which is already in the MAIN dictionary the following message is displayed:

WORD ALREADY EXISTS - DELETE IT?

Reply with "y" or "n". A "y" will cause the word to be removed from BOTH the MAIN and the USER dictionaries. "n" will leave the word in the MAIN dictionary and continue merging.

If you manually added words to the USER dictionary by editing it as a document, then included words must be in strict alphabetical order. The utility checks for this order and if it detects an error you will receive a message part way through.

After the MERGE operation you will find that the USER dictionary has been renamed to "OS.USER.OLD" just as it is when you ADD to the USER dictionary when spell checking.

Note: Due to the way the DOS (disk operating system) works the files will now be "scattered" across the disk space. While the dictionary is complete and this is not harmful, it will slow down the spell check because the drive has to search more to find the information. To "straighten-out" the files you should now use the COPY DICTIONARY command to copy the merged dictionary to a NEW disk.

Note: You have just made a backup and should store the "scattered" disk as a security copy in case anything happens to your original.

3.3.4 (F8) Exit Back to BASIC

Selecting this option will remove the GhostWriter word processing system and return to BASIC. If the GhostWriter diskette is in the drive, and the drive is on, the GhostWriter program will auto-boot after selecting this option.

IV. "HOW TO" QUICK REFERENCE GUIDE

The "how to" guide is a condensed reference guide of the manual consisting of word-processor commands, format controls, and other specific functions. Each entry shows a concise step-by-step set of instructions in order to perform a particular task. Also beside each entry is a 3-part section number in parentheses. That number represents a section elsewhere in the manual where the condensed information came from for that entry. Read those sections for more specific details on that function.

The following is an alphabetical list of all the entries in the "how to" guide. Entries for the "how to" guide are indexed in the MAIN INDEX as well.

C
Centering
Copy:
  Format Line
  Text

D
Delete Text
Device#:
  Disk
  Printer
Dictionary:
  Add Learned Words
  Create Empty Dictionary
  Copy Dictionary
  Merge User Dictionary
Disk Commands:
  Backup
  Directory
  Delete
  Format
  Rename

E
Embolden
Exit Prompts/Menus

F
Find

G
Goto a Page

H
Hide Symbols

I
Insert Text

J
Justify

L
Line Spacing
Linking Documents

M
Mail Merging:
  Creating Blanks
  Creating Data
Margins:
  Setting Left
  Setting Right
Memory Remaining
Merging Text
Move:
  Text
  Within A Document

N
New Document

O
Open Existing Document

P
Page:
  Join Pages
  New Page
  Numbering Pages
  Paginate

P (cont)
Printer:
  CONTROL Codes
  Print Document

Q
Quit the Session

R
Replace

S
Save Document
Screen Colors
Spell Checker:
  Calling Up
  Checking A Document
Subscript
Superscript

T
Tabs:
  Clearing
  Indenting
  Setting
  Tabbing

U
Underline

V
Verify

C

Centering
(2.2.6)
- Press CONTROL
- Press c
- Type text
- Press RETURN (Terminates Centering)
- Repeat for additional lines

Copy:

Format Line - (Last Used)
(2.2.2)
- Press CONTROL
- Press f

Text
(2.3.3)
- Position the cursor to the beginning of the text to be copied
- Press CBM
- Press c
- Position the cursor to the end of the text to be copied
  (Text will be highlighted in reverse video)
- Press RETURN
- Position the cursor to where the copied text will begin
- Press RETURN

D

Delete Text

(2.1.1)
- Position the cursor to the start of where the deletion will begin
  - For small deletes:
  - Hold INST/DEL until the desired text to be deleted is gone

OR

(2.1.2)
  - For large deletes:
  - Press F8 (SHIFT F7)
  - Position the cursor to the end of the text to be deleted
    (Text will highlighted in reverse video)
  - Press RETURN

Device #:

Disk - (Default is 8)
(2.3.18)
- Press CBM
- Press x
- Type d
- Type the new device number (ie: 8, or 9)
- Press RETURN

Printer - (Default is 4)
(2.3.18)
- Press CBM
- Press x
- Type p
- Type the new device number (ie: 4, 5, or 6)
- Press RETURN

Dictionary:

Add Learned Words
(3.2.1)

(After verifying the document)
- Press CBM
- Hold SHIFT and press RUN/STOP
- Insert the desired dictionary disk into the disk drive
- Press F1
- Press SPACE BAR

(Note: Added learned words become part of the User Dictionary.)

Create Empty Dictionary
(3.3.3)

(With the computer off)
- While holding the ALT key down, turn the computer on with the GhostWriter disk in the drive.
- Press F3
- Type a disk name (16 chars max) for the new disk
- Type a unique two digit alpha/numeric code for an ID (ie: a1, 01, or aa)
- Insert the blank disk (new)
- Press RETURN

(Note: Any data on the disk will be deleted.)

Copy Dictionary
(3.3.1)

(With the computer off)
- While holding the ALT key down, turn the computer on with the GhostWriter disk in the drive.
- Press F1
- Type a disk name (16 chars max) for the new disk
- Type a unique two digit alpha/numeric code for an ID (ie: a1, 01, or aa)

(Note: Any data on the disk will be deleted.)
THEN
- Insert the dictionary disk to be copied (old)
- Press RETURN
- Insert the blank disk (new)
- Press RETURN

Repeat insert steps until copy is complete

Merge User Dictionary
(3.3.3)

(With the computer off)
- While holding the ALT key down, turn the computer on with the GhostWriter disk in the drive.
- Insert the dictionary disk with the newly learned words on it
- Press F5

"HOW TO" QUICK REFERENCE GUIDE

Disk Commands:

Backup (3.3.2)

(With the computer off)
- While holding the ALT key down, turn the computer on with the GhostWriter disk in the drive.
- Press F2 (SHIFT F1)
- Type a disk name (16 chars max) for the new disk
- Press RETURN
- Type a unique two digit alpha/numeric code for and ID (ie: a1, 01, or aa)

THEN
- Insert the disk to be copied (old)
- Press RETURN (and wait)
- Insert the blank disk (new)
- Press RETURN (and wait)
- Repeat the insert steps until complete

Delete (Scratch) (2.3.4)

- Press CBM
- Press d
- Type s0:filename where filename is the name of the file to be scratched
- Press RETURN
- Press STOP (to exit DOS prompt)

Directory (2.3.19)

- Press CBM
- Press $ (SHIFT 4)

Format (New) (2.3.4)

- Press CBM
- Press d
- Type n0: followed by the new diskname (16 chars max)
- Type a , (comma) and a unique two digit alpha/numeric ID (ie: a1, 01, or aa)
- Press RETURN
- Press STOP (to exit DOS prompt)

(Note: Any data on the disk will be deleted.)

Rename a File (2.3.4)

- Press CBM
- Press d
- Type r0:newfilename (16 chars max) where newfilename is the new name for the file
- Press =
- Type the oldfilename where oldfilename is the old name of the file to be renamed
- Press RETURN
- Press STOP (to exit DOS prompt)

E

Embolden
(2.2.10)

(To turn embolden on)
- Press CONTROL
- Press e

(To turn embolden off)
- Press CONTROL
- Press e

Exit Prompts/Menus
(2.2.1)

(While in CONTROL or CBM prompts)
- Press RUN/STOP

F

Find (A string of characters)
(2.3.5)

- Position the cursor to the beginning of the document (Press CBM g 1 and RETURN)
- Press CBM
  - For exact matching:
  - Press f

OR

  - For any letter case match:
  - Press F (SHIFT f)
- Type the text to find (25 chars max)
- Press RETURN
  - To stop the search:
  - Press RUN/STOP

OR

  - Continue search for more matches:
  - Press RETURN

G

Goto a Page
(2.3.6)

- Press CBM
- Press g
  - For page numbers:
  - Type the desired page number

OR

  - For header page:
  - Press h

OR

  - For footer page:
  - Press f

OR

  - For work page:
  - Press w
- Press RETURN

H

Hide Symbols
(2.2.9)

- Press CONTROL
- Press h

I

Insert Text

(2.1.1)

- Position the cursor to the start of where the insertion will begin
  - For small inserts:
  - Hold SHIFT and INST/DEL until the desired amount of spaces are inserted
  - Type text into opened spaces

OR

(2.1.2)

  - For large inserts:
  - Press F7 (Begin insert mode)
  - Type text to be inserted
  - Press F7 or STOP (End insert mode)

J

Justify - (Default value is "off")
(2.5.12)

- Press CBM
- Press p
- Position the cursor to the Justify field
- Press y

(Note: Justification is NOT visible on the screen display. Justify is a print feature.)

L

Line Spacing - (Default value is 1)
(2.2.11)

- Position the cursor to the second column of the format line
- Type the digit for the number of lines desired for line spacing (1 thru 9 are legal)

(Note: Typing 2 will produce double-spacing.)

Linking Documents (For Printing)
(2.5.13)

- Press CBM
- Press p
- Position the cursor to the Global/Fill field
- Press g
- Press RETURN
- Type the file name of the next document to link to this existing document

M

Merging Mail:

Creating Blanks (2.6.1)

- Position the cursor to the beginning of where an entry blank should be created
- Press CONTROL
- Press m
- Press RETURN
- Repeat for all necessary entries

Creating Data (2.6.2)

(From the Work Page)

- Go to the Work Page (CBM g w RETURN)
  (Entry steps)
  - Press CONTROL
  - Press m
  - Type the variable data entry
- Repeat entry steps until enough variables have been created to fill one "set"
- Press CONTROL
- Press d
- Repeat for additional sets of Data

Margins:

Setting Left - (Default is 5) (2.2.3)

- Move the cursor to the desired format line
- Position the cursor one less than the desired margin setting
  - Press CONTROL
  - Press t

OR

  - Press the TAB key
- Delete any tabs preceeding the newly set margin setting using the space bar

(Note: The first tab of a format line is the left margin.)

Setting Right - (Default is 74) (2.2.3)

- Move the cursor to the desired format line
- Position the cursor on top of the RETURN symbol at the end of the format line
  - To increase the setting
  - Hold SHIFT and INST/DEL until the RETURN symbol reaches the desired margin setting

OR

  - To decrease the setting
  - Hold INST/DEL until the RETURN symbol reaches the desired margin setting

Memory Remaining (Bytes Free) (2.3.23)

- Press CBM
- Press SPACE BAR

Merging Text (From a file on disk) (2.3.8)

- Position the cursor to where the merged text will begin
- Press CBM
- Press M (SHIFT m)
- Type the name of the file on the disk
- Press RETURN
  - From other GhostWriter documents:
  - Specify the page numbers to merge followed by RETURN
    OR
  - Press RETURN twice for the whole document

OR

  - From PRG files:
  - Type p at the first page number followed by RETURN

OR

  - From SEQ files:
  - Type s at the first page number followed by RETURN

Move:

Text (2.3.7)

- Position the cursor to the beginning of the text to be moved
- Press CBM
- Press m
- Position the cursor to the end of the text to be moved

(Text will be highlighted in reverse video)

- Press RETURN
- Position the cursor to where the moved text will begin
- Press RETURN

Within A Document:

By Page (2.4.1)

- Press F1 to goto the next page
- Press F2 (SHIFT F1) for the previous page

By Screen (2.4.2)

- Press F3 to goto the next screen length
- Press F4 (SHIFT F3) for the previous screen length

By Tab Position (2.4.5)

- Press F5 to goto the next tab position

By End Of a Line (2.4.4)

- Press F6 (SHIFT F5) to goto the opposite end of a line

N

New Document (2.3.9)

- Press CBM
- Press n
- If "New Document?" prompt is displayed
  - Press "y" to start new document (Clears existing document in memory)

OR

  - Press "n" to abort

O

Open Existing Document (2.3.10)

- Insert the document data disk
- Press CBM
  - Press o
  - Type the name of the file

OR

  - Press $ (SHIFT 4)
  - Cursor down to the name of the file
- Press RETURN

P

Page:

Join Pages (2.2.7)

- Position the cursor on top of the end page symbol of the beginning page
- Press F8 (SHIFT F7) (End of page will be displayed in reverse)
- Press RETURN

New Page (2.2.7)

- Press CONTROL
- Press p

Numbering Pages (2.2.8/2.4.8)

- Position the cursor to the area of the document where the page number is desired
- Press CONTROL
- Press # (SHIFT 3) (A reverse pound symbol will be displayed)

Paginate (Auto-paginate) (2.3.2)

- Press CBM
- Press a
- Type in the number of lines to be printed on each page
- Press RETURN

Printer:

CONTROL Codes (2.2.11)

- Move the cursor to the desired format line
- Press CONTROL
- Press the digit desired to assign the control code to (0-9) (A reverse block will be displayed)
- Press =
- Type the ASCII code number

Print Document (2.5.18)

- Press CBM
- Press p
- Press F1

Q

Quit the Session (2.3.12)

- Press CBM
- Press q

(A warning prompt "Changes to the document not saved to disk" will be displayed)

- Press y (to RETURN to BASIC)

OR

- Press n (to abort the quit command)

R

Replace (A string of characters) (2.3.13)

- Position the cursor to the beginning of the text to be replaced (Use CRSR keys or use the FIND command)
- Press CBM
  - For one time replace:
  - Press r

OR

  - For global replace (multiple replaces):
  - Press R (SHIFT r)
- Position the cursor to the end of the text to be replaced (Maximum 28 Characters) (Text will be displayed in reverse.)
- Press RETURN
- Type the new text (25 characters max)
- Press RETURN

Global cycle:

- Press RETURN (for additional replaces)

  - Press SPACE (to skip this instance)

OR

  - Press RETURN (to replace this instance)

OR

  - Press STOP (to halt all replacing)

- Repeat Global cycle steps or press SHIFT and RETURN (to replace all instances)

S

Save
(2.3.14)

- Insert data diskette into the drive
- Press CBM
  - For normal save:
  - Press s

OR

  - For ASCII output:
  - Press S (SHIFT s)
- Type the name of the file
- Press RETURN

Screen Colors
(2.3.15)

- Press CBM
- Press t
  - To change text color:
  - Press or hold F1

OR

  - To change background color:
  - Press or hold F3

OR

  - To change heading color:
  - Press or hold F5

OR

  - To reset to default colors:
  - Press F7
- Press STOP

(Note: (default colors))
(80 Columns: Text=Yellow, Background=Black, Heading=Green)
(40 Columns: Text=Lt.Gray, Background=Blue, Heading=Lt.Gray)

Spellchecker:

Calling up
(2.3.22)

(From word processor mode)
- Press CBM
- Press SHIFT and RUN/STOP

(A unique word list will be generated provided there is sufficient memory left.)

Checking a Document
(3.1.3)

(After calling up the spell checker)
- Press F1
- Insert the desired dictionary disk
- Press the SPACEBAR

(An unrecognized word list will be generated)
- Press RUN/STOP (Twice)
- Press F8 (SHIFT F7) to alter the document

Subscript
(2.2.10)

- Press CONTROL
- Press s

Superscript
(2.2.10)

- Press CONTROL
- Press (up arrow)

T

Tabs:

Clearing
(2.2.3)
- Position the cursor to the tab to be cleared
- Press the SPACE BAR

Indenting - (A paragraph)
(2.2.4)
(Based on tabs set in the format line)
- Press CONTROL
- Press i
- Type text
- Press RETURN (Terminates indent mode)

Setting
(2.2.3)
- Move the cursor to the desired format line
- Position the cursor in the column one less than the desired tab marking
  - Press CONTROL
  - Press t

OR
  - Press the TAB key

(Set as many tabs as needed)

Tabbing
(2.2.5)
(Based on tabs set in the format line)
- For normal tab:
  - Press CONTROL
  - Press t

OR
  - Press the TAB key
- Type text

- For numerical tab:
- Press CONTROL
- Press . (Period)
- Type numerical data

U

Underline
(2.2.10)
(To turn underline mode on)
- Press CONTROL
- Press u

(To turn underline mode off)
- Press CONTROL
- Press u

V

Verify - (A document)
(3.1.6)

(After calling up the spellchecker) &
(After spellchecking the document)

- Position the cursor to the beginning of the document (CBM g 1 RETURN)
- Press CBM
- Press v
  - To edit the word:
  - Press e

OR

  - To skip this particular instance:
  - Press s

OR

  - To accept this word and any further occurrence of this word:
  - Press a

OR

  - To learn this word to the user dictionary:
  - Press l (letter l, not the number 1)

(Verify cancels when all unrecognized words have been highlighted)

APPENDIX A: SYSTEM PROMPTS

System prompts are displayed in the screen heading.

Which Command?	-	Displayed after pressing the CBM key. Press the required command key, press STOP to cancel.
Delete What?	-	After issuing the DELETE command, highlight the text to be deleted and press RETURN.
Copy What?	-	After issuing the COPY command, highlight the text to be copied and press RETURN.
Move What?	-	After issuing the MOVE command, highlight the text to be moved and press RETURN.
To Where?	-	Now indicate where the text is to be moved or copied to by positioning the cursor to required location, press RETURN.
Insert What?	-	Displayed after issuing the INSERT command. Type the insert and press F7 or the STOP key to end insert.
Save Document	-	After issuing the SAVE command, type the name of the document to store on disk and press RETURN.
Quit Back to Basic	-	After issuing the QUIT command, press RETURN to end a session of GhostWriting and to go back to BASIC.
Find What?	-	After issuing the FIND command, type the required character sequence to be searched for; press RETURN.
Replace What?	-	After issuing the REPLACE command, highlight the text to be replaced and press RETURN.
Replace With?	-	During a REPLACE, type the sequence of charcters that are to replace the highlighted characters, press RETURN.
Go to Page:	-	Type the required page number and press RETURN or type "w", "h", or "f" to go to Work, Header or Footer pages.
==	-	Used to enter a disk operating system (DOS) command.
Name:	-	Type the name of the document that is to be saved or opened and press Return.

Merge: Page: To: - After issuing the MERGE document command, type the name of the document to be merged and the ranges of pages.

xxxxx Characters Free
(Where xxxx is the number) - Shows the number of characters remaining that can be typed into the document memory before the message INSUFFICIENT MEMORY is displayed.

F1=Text F3=B'grnd F5=Heading Tone? - Displayed after issuing the TONE command. Cycle through the color tones until a suitable combination is reached. Press STOP to exit.

SPACE=Cont HOME=Restart F1=Abort - Displayed when printing is interrupted by pressing the STOP key. Press SPACE to continue printing, press HOME to restart printing from the top of the current page, or press F1 to abort printing.

Press SPACE to print (CLR to skip page) - Displayed before printing a new page, when printing on single sheet stationery (letterhead paper) - pressing the CLR key will skip over the complete page.

APPENDIX B: SYSTEM MESSAGES

System messages are displayed at the bottom of the screen.

Invalid Key -
Displayed after pressing an unused command key.

Incomplete Merge - Insufficient Memory -
During a document merge from disk, the document memory has become full. Not all of the requested information has been merged.

Insufficient Memory -
Document memory has become completely full. Save the document to disk. Split the document up by creating 2 new documents; MERGE the first-half of pages into a blank document to create one document. Save it out, and repeat with a new document for the second-half of pages. Use the GLOBAL print facility to print the two documents as one.

Device Off-Line Error -
Either the disk drive or printer is not connected properly.

More...Press Space Bar -
When displaying a disk directory there are more entries to display than will fit on one screen. Press SPACE for the next screenful, or press STOP to cancel.

File Type Mismatch -
The name given to open the GhostWriter file is not a GhostWriter file or was misspelled. Re-enter the name, or press STOP to cancel.

CHANGES NOT SAVED - Continue y/n?
After issuing the QUIT, NEW, or OPEN command, GhostWriter will warn you that the document memory has not been saved to disk since it was last altered and that by continuing with the command you will LOSE the document in memory.

Press the STOP key to cancel the command and then issue the SAVE command to save the document to disk, or press RETURN to continue with the command.

Press RETURN to find next -
During the FIND command GhostWriter pauses at each occurrence of the search sequence. Press RETURN to continue for next sequence, or press STOP to end.

Press RETURN to replace, SPACE to skip -
During a GLOBAL REPLACE - GhostWriter pauses at each occurrence of the highlighted sequence to be replaced. Press RETURN to replace the sequence, press SPACE to not replace this sequence, press SHIFT RETURN to replace all further sequences, or press STOP to end replacing.

Other Messages...
When saving or recalling a document to or from disk, other messages can be displayed. They will be DOS (disk operating system) messages. Although they are usually self-explanatory, each message is detailed in your CBM disk manual.

APPENDIX C: SAMPLE DOCUMENTS

Several sample documents are supplied on the GhostWriter disk. Each sample is intended to show how certain commands are used, and in conjunction how they can perform a certain application. Each file can be loaded into memory by using the OPEN command.

Filename: **open me**	The "open me" document can be opened like any normal document. It will contain any erratas or differences between the enclosed version of this diskette and this manual.
Filename: **help**	This "help" document contains a list of commands, format symbols, and other useful information. While working on your own document, you may use the MERGE command to put this file into the Work Page. From then on it can be easily referred to by using the GOTO command.
Filename: **sample 40**	The "sample" document contains almost every kind of formatting that you are likely to want to do. This document can be used to look at and practice some of those formats. This sample is in a 40 column version.
Filename: **sample 80**	This is identical to sample 40, only it is in an 80 column version. (Both samples can be loaded into either column version.)
Filename: **merge letter**	The "merge letter" document shows how to contstruct a standard letter using MERGE symbols. This document can be repeatedly printed for all the names and addresses in the Work Page. Try printing it, by setting your printer type and pressing F1 from the print option screen.
Filename: **merge label**	The "merge label" document shows how to print out labels repeatedly. Names and addresses are set in the Work Page and Page 1 of the document contains just 4 merge symbols, (one for each name and address line).

APPENDIX D: UTILITIES & DICTIONARY FILES

The following files are part of the GhostWriter spell checker facility. It is recommended that these files be copied onto a NEW (blank, yet formatted) disk using the UTILITY program, "UT".

SPELLCHECKER	The spelling checker used from within GhostWriter
SC.USER.OLD	The previous USER dictionary
SC.USER.DICT	The current USER dictionary
SC.MAIN.DICT.A	The MAIN dictionary
SC.MAIN.DICT.B	
SC.MAIN.DICT.C	
SC.MAIN.DICT.D	
SC.MAIN.DICT.E	
SC.MAIN.DICT.F	
SC.MAIN.DICT.G	
SC.MAIN.DICT.H	
SC.MAIN.DICT.I	
SC.MAIN.DICT.J	
SC.MAIN.DICT.K	
SC.MAIN.DICT.L	
SC.MAIN.DICT.M	
SC.MAIN.DICT.N	
SC.MAIN.DICT.O	
SC.MAIN.DICT.P	
SC.MAIN.DICT.Q	
SC.MAIN.DICT.R	
SC.MAIN.DICT.S	
SC.MAIN.DICT.T	
SC.MAIN.DICT.U	
SC.MAIN.DICT.V	
SC.MAIN.DICT.W	
SC.MAIN.DICT.X	
SC.MAIN.DICT.Y	
SC.MAIN.DICT.Z	
UT	The UTILITY program

The Utility program is loaded by its own special boot.

To load it:	Turn off the Commodore 128 with the disk drive on. Insert the GhostWriter diskette into the drive. Hold the ALT key (upperleft row, third key) down, while turning on the machine. The program will load shortly.

APPENDIX E: DATA FILE FORMAT

This information is intended for users who wish to read or write GhostWriter document files from BASIC or machine-language programs. A knowledge of programming experience is assumed.

To process a GhostWriter document from BASIC, the GET# command should be used. Consult your disk drive or computer manual for use on this command.

A GhostWriter document file is stored as a sequential file, (SEQ). The first 200 bytes (characters) are for document use. The remaining characters comprise the rest of the document, including all text and any format symbols.

Byte Position	Name Label	Description
0-1	BYTES	Total number of characters in the document.
2-3	PAGES	Total number of pages in the document.
4-14	RESERVED	-
15-31	NAME	The full document name in CBM ASCII, terminated by $60*
32-33	PRINTER	Printer model as keyed into print option.
34	BAUD RATE	Unused on CBM 64/128 version.
35	FORM FEED	Form feed capability.
36	AUTO L/FEED	Automatic line feed capability.
37-38	FORM LENGTH	Length of form, in lines.
39	SINGLE	Single sheet or continous.
40-41	OFFSET	Printer column offset.
42	HEADER	Header suppress indicator.
43	RESERVED	-
44-45	PITCH	Printer pitch.
46-47	LINES/INCH	Number of lines per inch.
48	JUSTIFICATION	Full margin justification indicator.
49	GLOBAL/FILL	Global print or fill document indicator.
50-66	FILE	Name of next document in global chain, or name of outside information source to fill from.
67	HEADING COLOR	As set by default or user.
68	TEXT COLOR	As set by default or user.
69	SCREEN COLOR	As set by default or user.
70-199	RESERVED	For future use.

*Numbers preceeded by a dollar sign ($) are in hexadecimal.

Two byte fields are held as hexadecimal numerics in typical lo/hi form.
File names are held in CBM ASCII code.

Any numeric value is held in straight lo/hi hexadecimal.
All other fields are held in screen ASCII code.

APPENDIX F: ASCII/CHR$ CONVERSION CHART

Every key on the keyboard can be represented by an ASCII value. ASCII is one of the few standards in the computer industry, but even some computers have their own modified ASCII. The following chart will show the equivalent for all ASCII and CHR$ codes for Commodore Computers.

Note: For those codes that have no corresponding key that can be pressed, the entry will remain blank. An asterisk (*) denotes a shift to be used with the key shown..

ASCII Value	CHR$ Key	ASCII Value	CHR$ Key	ASCII Value	CHR$ Key	ASCII Value	CHR$ Key	ASCII Value	CHR$ Key
1		39	'	77	m	115	S	153	CBM 6
2		40	(	78	n	116	T	154	CBM 7
3		41	)	79	o	117	U	155	CBM 8
4		42	*	80	p	118	V	156	CTRL5
5	CTRL2	43	+	81	q	119	W	157	CRSR Lf
6	CTRL←	44	,	82	r	120	X	158	CTRL8
7		45	-	83	s	121	Y	159	CTRL4
8		46	.	84	t	122	Z	160	SPACE*
9	TAB	47	/	85	u	123	+*	161	CBM K
10	L/FEED	48	0	86	v	124		162	CBM I
11		49	1	87	w	125	-*	163	CBM T
12		50	2	88	x	126		164	CBM @
13	Return	51	3	89	y	127		165	CBM G
14		52	4	90	z	128		166	CBM +
15		53	5	91	[	129	CBM 1	167	CBM M
16		54	6	92	£	130		168	CBM *
17	CRSR Dn	55	7	93	]	131		169	
18	CTRL9	56	8	94	!	132		170	CBM N
19	HOME	57	9	95	←	133	F1	171	CBM Q
20	DEL	58	:	96		134	F3	172	CBM D
21		59	;	97	A	135	F5	173	CBM Z
22		60	<	98	B	136	F7	174	CBM S
23		61	=	99	C	137	F2	175	CBM P
24	TAB*	62	>	100	D	138	F4	176	CBM A
25		63	?	101	E	139	F6	177	CBM E
26		64	@	102	F	140	F8	178	CBM R
27	ESC	65	a	103	G	141	Return*	179	CBM W
28	CTRL3	66	b	104	H	142		180	CBM H
29	CRSR Rt	67	c	105	I	143		181	CBM J
30	CTRL6	68	d	106	J	144	CTRL1	182	CBM L
31	CTRL7	69	e	107	K	145	CRSR Up	183	CBM Y
32	SPACE	70	f	108	L	146	CTRL0	184	CBM U
33	!	71	g	109	M	147	CLR	185	CBM O
34	"	72	h	110	N	148	INST	186	
35	#	73	i	111	O	149	CBM 2	187	CBM F
36	$	74	j	112	P	150	CBM 3	188	CBM C
37	%	75	k	113	Q	151	CBM 4	189	CBM X
38	&	76	l	114	R	152	CBM 5	190	CBM V

Appendix G: ASCII equivalents for Format Symbols
After the first 200 bytes (characters) of a GhostWriter document is a continuous stream of text characters and format symbols. The text is not formatted and is held in screen ASCII codes. Format symbols are just like normal characters, except they are not printable.

For those who wish to read or write GhostWriter files using their own BASIC or machine-language programs, here is a list of format symbols, and their corresponding ASCII values. ASCII values given are in decimal.

Format Symbol		ASCII Value
TAB	-	219
RETURN	-	220
NUMERIC TAB	-	221
CENTER	-	223
FORMAT LINE	-	230
MERGE	-	233
DON'T MERGE	-	234
INDENT	-	235
SUBSCRIPT	-	236
EMBOLDEN	-	237
UNDERLINE	-	238
SUPERSCRIPT	-	239
PAGE BREAK	-	241

APPENDIX H: DRIVING CENTRONICS PARALLEL PRINTERS

Although most Centronics parallel interface manufacturers use the 6-pin serial (same as disk drive), a low cost cable can be made or purchased to connect Centronics parallel printers to the user port. If you are using a printer with this particular set-up, you are able to use GhostWriter by replying with the proper UPPERcase letter for the "Printer Type:" prompt within the Print Options Menu.

APPENDIX I: USING CBM IEEE PERIPHERALS

For those systems that are using CBM IEEE interfaced peripherals, you can use GhostWriter in much the same manner as normal peripherals. However, when dealing with dual disk drives, please keep in mind that the CBM x command can be used to switch drive access between 0 (zero) and 1.

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